American
FORESTS
The Magazine of Forests, Soil, Water, Wildlife, and Outdoor Recreation
MAY 1959 **50 CENTS**



"HOWDY THE RACCOON"

Another Forestry First . . . Page 12



With positive top grab-arm log control and a loading height to 13 feet, Wilkinson Company's Skid-Grapple can "spot" big logs accurately on truck, rail car or cold deck. Inset view shows owner Paul Wilkinson.



"There's a lot of gravy for the owner of an International Drott Skid-Grapple"

—Wilkinson Logging Co., Eureka, Calif.



"I save two men, by using the International Drott Skid-Grapple to load logs," states Paul Wilkinson, for Wilkinson Logging Co., Eureka, Calif. "The operator can easily make his load with only the truck driver's help. No extra men needed for dangerous end tong jobs.

"The Skid-Grapple's operator can also bring in big turns of logs; or put haul roads in shape, using the bucket attachment for dirt and rock work. There's a lot of gravy for the owner of this machine."

Two men run the "show"

Wilkinson Company logs redwood near Eureka on cut-over and virgin tracts. Two men with the company's International TD-24 ground-skid logs from mountainside to landing—then use the Skid-Grapple to cold-deck, or load them directly into haul trucks.

Their logs average 2,000 bf, though some go to 8,600 bf. The big Skid-Grapple handles them all, with ease.

See the complete line of International Drott Skid-Grapples—a size and type for every log, lumber or pulp loading, or decking need. For handling big logs, try the International Drott TD-20 West Coast special Skid-Grapple—for 16,000 lb. or more lift, long-track stability, ample hydraulic power! Compare TD-20 fast shuttling action—with 6-speed full-reverse transmission; speedy Shuttle-Bar forward-reverse control. Ask your International Drott Distributor for a demonstration!

International Harvester Company, Chicago 1, Illinois
Drott Manufacturing Corp., Milwaukee 15, Wisconsin

INTERNATIONAL HARVESTER

INTERNATIONAL® DROTT®



PHOTOGRAPHS COURTESY U. S. FOREST SERVICE

THE BELL

fights fire with TIME

Wherever a man's job is to fight timber fires, his most valuable tool is *time*. And *time* is what the Bell helicopter gives him. Time to scout, to take in men and supplies, to retrieve smoke jumpers and equipment, to bring out injured persons, to patrol the mop-up. Just how dependably the Bell performs such jobs is a matter of record. Here's a case, taken from our files:

1958 was one of the West Coast's worst years for fires. A year when storms set fires numbering in the thousands — 1,901 of them in one area alone. Here, where 63 major fires swept seven national forests, helicopters were put to work carrying out a careful plan of detection and control. The results speak for themselves.

In one sector — a 350-acre fire — four helicopters made 950 flights, carried 2,000 passengers, 600 pounds of paracargo and 2,800 pounds of air freight. Cost: $16,000. *Estimated cost by other transportation: $33,500!* In addition, helicopters saved an estimated $30,000 in labor and overhead. They saved an estimated *$300,000* in resources and suppression costs.

With this much to go on, you'll want to learn a great deal more about the Bell's role as fire fighter — so, write us today. We'll send you some eye-opening reports on helicopter techniques perfected by forestry men, and their resultant successes. Dept. 32E, Bell Helicopter Corporation, Fort Worth, Texas.



BELL Helicopter CORPORATION

FORT WORTH, TEXAS

Subsidiary of Bell Aircraft Corporation

AFA OFFICERS

Don P. Johnston • *President*
Edward P. Stamm • *Vice-President*
John M. Christie • *Treasurer*
Fred E. Hornaday • *Executive Vice-President*
Kenneth B. Pomeroy • *Chief Forester*
James B. Craig • *Secretary*
Ovid Butler • *Exec. Director Emeritus*

BOARD OF DIRECTORS

Wilson Compton, 1959 — Virginia, Chairman of the Board, Cameron Machine Company.

Charles A. Connaughton, 1961 — California Regional Forester, U. S. Forest Service.

George L. Drake, 1961—Washington, Consulting Forester.

Albert Ernest, 1959 — Florida, Vice-President, St. Regis Paper Company.

Stanley G. Fontanna, 1960—Michigan, Director, School of Natural Resources, University of Michigan.

Karl T. Frederick, 1961 — New York, Chairman, New York State Conservation Council.

Mrs. Katharine Jackson Lee, 1960 — New Hampshire, Connecticut River Watershed Council, Inc.

Henry T. McKnight, 1961 — Minnesota, Chairman, Keep Minnesota Green Committee.

George Wall Merck, 1959 — New Jersey, New York Zoological Society.

DeWitt Nelson, 1961 — California, Director of Natural Resources.

Richard J. Preston, Jr., 1960 — North Carolina, Dean, School of Forestry, North Carolina State College.

Carl F. Rehnborg, 1959—California, President, Foundation for American Resource Management.

H. B. Shepard, 1960 — Massachusetts. Consulting Forester.

Philip W. Smith, 1960 — Pennsylvania. Dairy Farmer.

James J. Storrow, 1959—Massachusetts, Vice-President, New England Forestry Foundation.

REGIONAL VICE PRESIDENTS

Southern: Vertrees Young, Louisiana. Gaylord Container Corporation.

Northeastern: Lloyd E. Partain, Pennsylvania. The Curtis Publishing Company.

Southeastern: X. L. Pellicer, Florida. Vice-President, The St. Augustine National Bank.

Western: W. S. Rosecrans, California.

Central: G. B. Bonfield, Michigan. Vice-President, American Box Board Company.

HONORARY VICE PRESIDENTS

Mrs. Harold Christensen, Utah
Walter J. Damtoft, North Carolina
Samuel T. Dana, Michigan
Paul M. Dunn, New Jersey
T. W. Earle, Georgia
Nolen J. Fuqua, Oklahoma
George A. Garratt, Connecticut
Maurice K Goddard, Pennsylvania
Frank B. Hubachek, Illinois
Nils B. Hult, Oregon
Eldon L. Johnson, New Hampshire
Preston B. Kavanagh, District of Columbia
Harley Langdale, Jr., Georgia
R. Vance Miles, Jr., Alabama
Bernard L. Orell, Washington
Arthur N. Pack, Arizona
Ted S. Pettit, New Jersey
John W. Squires, Mississippi
Mrs. Thomas M. Waller, New York
George O. White, Missouri
Harold G. Wilm, New York

American FORESTS

PUBLISHED BY THE AMERICAN FORESTRY ASSOCIATION

James B. Craig
Editor

Betty Kindleberger
Assistant Editor

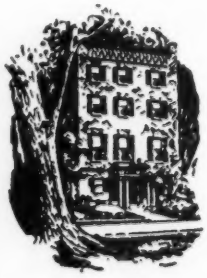
James J. Fisher
Art Director

Volume 65, No. 5 | *May, 1959*

CONTENTS

5 CAMPING IN PAPER
6 "SHEAR" HARD WORK • *Charles V. Mathis*
8 A WESTERNER LOOKS AT WILDERNESS
9 WASHINGTON LOOKOUT • *Albert G. Hall*
11 EDITORIAL—NATIONAL FORESTS USE: PRIVILEGE OR RIGHT?
12 HOWDY THE RACCOON—ANOTHER FORESTRY FIRST • *Lloyd E. Partain*
15 BEAR FACTS • *Dave Mech*
16 NATIONAL FORESTS LOOK AHEAD
20 MAPLE BLIGHT—A NEW FIGHT • *D. D. Skilling*
22 THE C. & O.—PARK OR PARADOX • *Daniel A. Poole*
24 OUR NATIONAL RIVER
31 SEQUOYA • *William Prescott Ogilvie*
34 CAPE COD: "NATIONAL SEASHORE OR NATIONAL EYESORE?" • *Betty Kindleberger*
36 SMALL FARM FORESTS IN NORTHERN GERMANY • *Wolfgang Koehler*
39 FORESTER'S NOTEBOOK • *Kenneth B. Pomeroy*
64 READING ABOUT RESOURCES • *Monroe Bush*

COVER • *Smokey the Bear is going to have a partner if the Pennsylvania Forestry Association has anything to do with it. After a statewide contest for school children to name the raccoon featured on the cover, judges got together on April 20 to select the winner from 51,000 entries. In the unanimous opinion of the judges, a first grader living near Pittsburgh came up with the right answer. "When I first saw him in a picture, I thought he was saying 'Howdy' to me," the winner said. "So I decided to call him 'Howdy.'" And "Howdy" it is, subject to a check by attorneys through government patent and trademark files. "Howdy the Raccoon" and winners in the contest to name him will be introduced to AFA members at the 84th annual meeting October 11-14 in Bedford, Pennsylvania.*



The AFA

The American Forestry Association, publishers of *American Forests*, is a national organization — independent and non-political in character — for the advancement of intelligent management and use of forests and related resources of soil, water, wildlife and outdoor recreation. Its purpose is to create an enlightened public appreciation of these resources and the part they play in the social and economic life of the nation. Created in 1875, it is the oldest national forest conservation organization in America.

AMERICAN FORESTS is published monthly by The American Forestry Association at 919 Seventeenth Street, N. W., Washington 6, D. C. Subscription price $6 a year. Editors are not responsible for loss or injury of manuscripts and photographs while in their possession or in transit. The Editors are not responsible for views expressed in signed articles. Second-class postage paid at Washington, D. C., and at additional mailing offices.

Copyright, 1959, by The American Forestry Association.

WATER DOESN'T RUN UPHILL
IN THE
SEABOARD SOUTHEAST

. . . . but the "sustained yield" potential of our 113 million acres of fast-growing forests comes close to permitting our wood-using industries to "eat their cake and have it too." . . . .

. . . . which is by way of saying that we are growing timber faster than it is being used. Wood and water are in abundant supply in the Seaboard Southeast.

Let us tell you about some of the excellent pulp and paper sites in this favored area.

Address: **Warren T. White**
Assistant Vice President
Seaboard Air Line Railroad Company
3600 W. Broad Street
Richmond, Virginia



THROUGH THE HEART OF THE SOUTH

Forest Forum

Cape Cod Seashore Urged

EDITOR:

. . . I am strongly in favor of the proposed Cape Cod National Seashore and have been for three years. Our report of June, 1956, to the Massachusetts Commissioner of Natural Resources called attention to the critical need for a coordinated approach to solution of the problems the Commonwealth faces with respect to its natural resources—land, forests, water, wildlife, and ocean and inland beaches.

In this report, and a subsequent report on outdoor recreation, we pointed out that a particular emergency exists with respect to the beaches, both ocean and inland. The need for immediate action to head off further inappropriate private acquisition and development, and to insure the preservation of beach frontage for general public use was, and still is, extremely urgent.

Our conclusion, based on exhaustive study and review, is that while Massachusetts should embark on a comprehensive program of acquisition and development of lands for use as state parks and ocean and inland beaches, the size, character, and national importance of the Great Outer Beach of Cape Cod make its acquisition and management as a federal facility more appropriate.

There is some opposition on the part of the Cape Cod people who fear that establishment of the proposed National Seashore would affect the local economy unfavorably. Their thinking seems to center largely around a fear that the establishment of the National Seashore would affect their future potential for taxable property adversely.

There is good reason for believing that the opposite is true—that the establishment of the proposed facility would enhance rather than damage the towns' prospects for economic well-being. The purpose should be to attract considerable numbers of people to a naturally beautiful area rather than a relative few to an area which looks like just another real estate development. These seem to be the alternatives. Some of us would regret seeing the dunes scraped away to make room for more summer cottages, even though they might be pretty good cottages. And we cannot even be sure that they would be.

Access by the public will, of course, vary inversely with the extent to which the area is turned over to private cottage owners. This is a condition which already exists on too much of our ocean frontage.

I am impressed by the results of the Park Service's study as written up in "*Our Vanishing Shore Line*." What more convincing evidence do we need than that? Their recent brochure, "*Cape Cod Seashore —A Proposal*" also provides excellent support with public appeal.

My fervent hope is that The American Forestry Association will do everything it properly can to support the proposal that the federal government establish the Cape Cod National Seashore. I feel sure that this will be the case. I also hope that the legislation, in its final form, will *not* include the requirement that 50 per cent of the land be acquired through donation or with donated funds. I think the hurdle this requirement would set up would be too high.

H. B. Shepard
Associate Consultant
Edwards and Kelcey,
Engineers and Consultants
Boston, 10, Massachusetts

"I Must Say . . ."

EDITOR:

This is just a note to heartily congratulate you on your April issue which is full of very interesting articles and pictures.

Both Mrs. Albright and I were particularly pleased with your excellent interview with Miss James. This could not have been better. We regard her as one of the most remarkable women we have ever known. She is indeed a wonderful person and has done work of extraordinary influence and importance for many years. It was a very thoughtful move on your part to arrange the interview and give it so much prominence in the magazine.

Next I want to commend you and your staff for the foresight and good judgment in getting Marion Clawson to write the two articles on the "Crisis in Outdoor Recreation." These are outstanding articles. As a member of AFA and as an officer of Resources for the Future, I am very proud of this editorial achievement. . . .

Horace M. Albright
Wykagyl Gardens
New Rochelle, N. Y.

AWARDS PROGRAM

Christopher M. Granger, former assistant chief of the Forest Service, was elected chairman of the Awards Committee of The American Forestry Association on March 26. Other members are Dr. S. T. Dana, dean emeritus, School of Natural Resources, University of Michigan; Lloyd E. Partain, president, Pennsylvania Forestry Association; Ernest F. Swift, director, National Wildlife Federation; Horace M. Albright, former director, National Park Service; and J. E. McCaffrey, vice president, International Paper Company.

The committee announced that nomination forms will not be mailed out in large numbers this year as previously. Application blanks will be furnished by the association upon request, and full instructions will be contained therein.

Bulky exhibits accompanying nomination forms will be discouraged, the committee said, and it will not be necessary to send photographs of candidates as was the case previously.

Strong for Multiple Use

EDITOR:

I have read this morning with a lot of interest Mr. C. J. Olsen's article on Mt. Wheeler published in the AMERICAN FORESTS magazine for February, 1959.

I want to commend Mr. Olsen for this lucid and definitive article and most of all for his strong position in the interest of multiple use. I hope both Mr. Olsen and AMERICAN FORESTS magazine will continue in this philosophy because I believe it is one which will do most for the development of the West in the future.

George D. Clyde
Governor of Utah
Salt Lake City

Wheeler Peak as a Park

EDITOR:

I was most interested in Mr. C. J. Olsen's article, "The Proposed Invasion at Mt. Wheeler," in the February issue of AMERICAN FORESTS.

Seems to me the word "invasion" is a misnomer as applied to the proposed Great Basin National Park, inasmuch as the U.S. Forest Service recently announced plans for a scenic area in Nevada's Snake Range, with a road up Lehman Creek canyon to Stella Lake, summer home colonies, and other "multiple-use" developments. I am a little puzzled about who is invading what.

His statement that the Matthes is a névé, not a true glacier, is interesting, but not new. It wasn't until 1955 that it came into the news. Apparently Mr. Olsen hasn't almost fallen into the bergshrund and hidden crevasses as have some of the rest of us.

However, as to his main theme, I'm not going to argue. I first suggested the Wheeler Peak area as suitable for a national park area and am willing to take the responsibility—or onus, if there is one.

Weldon F. Heald
2137 East Eighth Street
Tucson, Arizona

Camping in Paper

Photographs by Wide World Photos

SPORTING goods merchants will be displaying some new items this month — camping equipment made of paper. The equipment includes a seven-foot tent, which sleeps two adults and two children, a four-foot-square tent for two, a 20-foot para-wing for shelter, a sleeping bag, and a station wagon boot which turns the back of a station wagon into private camping quarters.

The paper material, made of cellulose fibers with nylon threads for strength, is available in several bright colors and designs. The equipment is said to be waterproof, fire-retardant, and lightweight. A tent for two people weighs less than five pounds. Cost of the paper equipment is estimated at about one-third of that of conventional camping equipment.



Three youngsters peep out of one of the large paper tents, which will accommodate four

Soldier tests paper equipment in snow



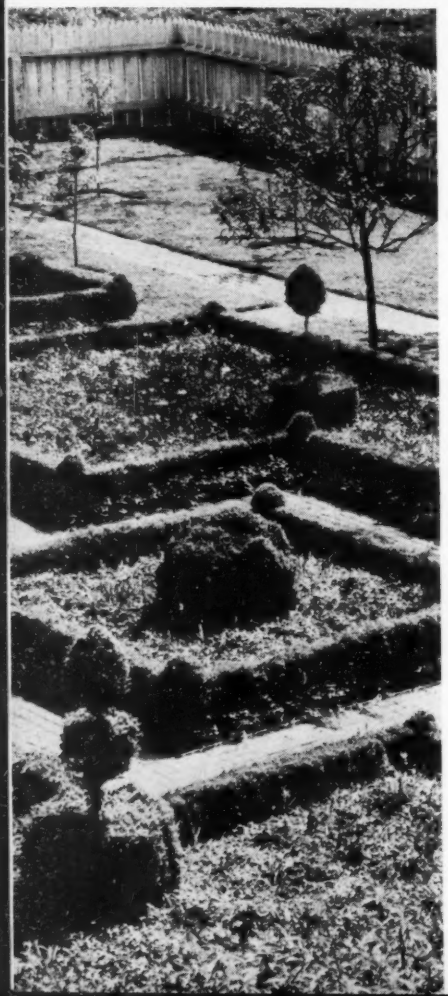
A youngster packs paper equipment in station wagon, all set for an outdoors vacation





Yearicks topped this bicycle rider statue with yellow hat

In center bed of a Williamsburg garden is boxwood cut in shape of setting hen



"SHEAR"

THE weekend gardener who views hedge trimming as a necessary evil ought to get together with Gus Yearicks, of Wildwood-by-the-Sea, New Jersey.

Yearicks trims hedges too, but he wields his pruning shears as no suffering suburbanite ever dreamed of wielding. For 27 years he's pruned and snipped, fashioned and clipped and puttered around for some 40 hours weekly in the square acre of garden he calls the Cape May county hedge gardens.

The result is a veritable fairyland of ships, animals, people, and objects of familiar interest, all carved out of ordinary privet hedge with delicate and loving care.

These examples of evergreen geometrical genius are individual masterpieces making up a fantastic garden.

It looks for all the world as if someone had left a pair of garden shears lying around and the artistic urge was too great for a sculptor to deny! So famous are the sculptures of Mr. Yearicks' gardens that they are now a point of interest to many visitors and vacationists to Wildwood-by-the-Sea, Wildwood Crest and the other Jersey Cape resorts.

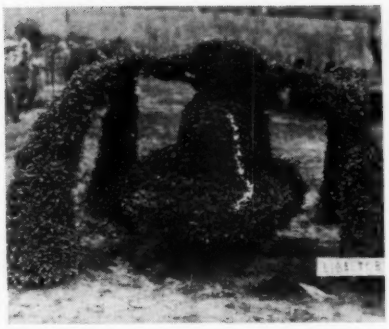
He has fashioned a whole menagerie of weird and wonderful animal forms. This gardener is a nature lover and many of his subjects are drawn from wildlife, including an elephant, a lion, horses and an alligator. There is a fat, jolly Santa Claus, complete with reindeer and sleigh. He beams over the whole enchanted scene from behind glossy evergreen whiskers.

There is a replica of the Queen Mary, being eased into dock by a half-dozen miniature tugs also made of hedges.

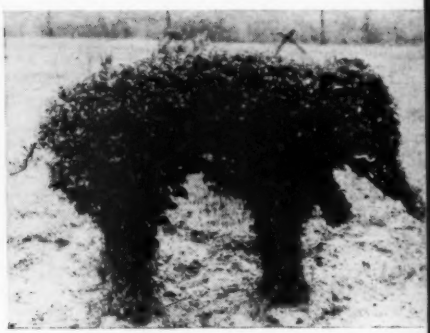
A full-rigged clipper ship, the Cutty Sark, sails on majestically with



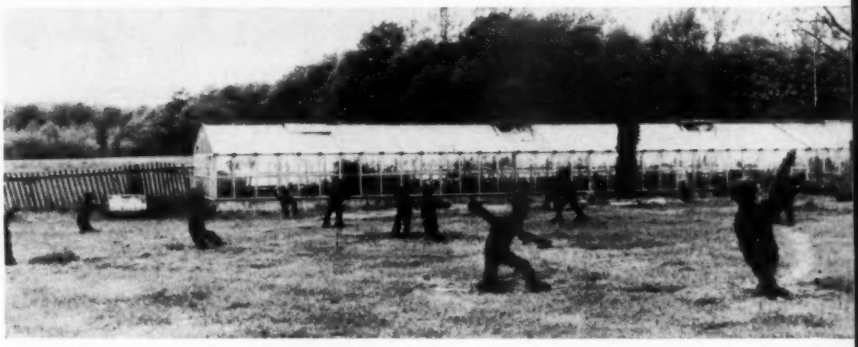
The Statue of Liberty holding the flag is included in Yearicks' famous garden



On the Liberty Bell a streak of silver paint simulates crack in original bell



Numerous types of animals have been fashioned from ordinary privet hedge



Baseball game shows privet hedge figures in a variety of postures

HARD WORK

By CHARLES V. MATHIS

hardly a second glance from a whole ball team, in various lifelike stances, engaged in an old-fashioned ball game.

The creator of all this—a living gallery of nearly a hundred other strange and wonderful evergreen statues—is a tall, lanky, blue-eyed 62-year-old man with thinning reddish hair, who combines the sensitive skill of an artist with the practical hand of a horticulturist.

Yearicks is what is known as an advanced topiarist, the practitioner of a form of gardening that consists of "bush-barbering"—the shaping and cutting of hedges to resemble everyday objects. It is one of the oldest practices known to gardening, and was first mentioned in the fragmentary records of Egyptian gardening.

Topiary first became customary in English gardens, although this craft can be traced back some 2,000 years to Roman times. The Chinese and Dutch are also noted for their skillful use of the art.

The name is derived from Topiarius, a Roman gardener famed for his skill at trimming box trees to give them the appearance of boats, animals, and geometrical shapes.

There are other notable hedge gardens in Vancouver, B. C., Bombay, India, and Versailles, France. The art is also represented in the restored 18th century gardens of Williamsburg, Va., the Hunnewell estate at Wellesley, Mass., and in Crete, Nebraska.

Yearicks regards his square acre on Tabernacle Road, in Wildwood-by-the-Sea, N. J., as the finest of its type in the United States, and perhaps in the entire world.

He works 40 hours a week at the Cape May Point magnesite plant and spends another 40 hours weekly in his topiary hobby.

This topiarist makes the best of the two worlds of the gardener and the sculptor. Mr. Yearicks is both builder and architect, but the materials he uses are living hedges instead of inanimate stone. Where the ordinary gardener must necessarily work in irregular broken masses, the topiarist can employ straight lines, plane surfaces, and all the forms of solid geometry.

His green masonry also has an advantage over the sculptor's stonework—it is alive and is diversified by the countless intricate details of a living organism. A flat surface that is composed of little leaves is more interesting and richer in quality than the flat surface of a stone.

Out of his hobby have emerged such statues as a bicycle rider wearing a yellow hedge hat, a stagecoach and six horses, and the model of the full-rigged clipper ship, which required 22 years to complete.

(*Turn to page* 50)

A WESTERNER LOOKS AT WILDERNESS

AN argument that has been used effectively on easterners by proponents of the Wilderness Bill—and one that annoys some westerners the most—is the one that goes, "After all, the area proposed for inclusion in the Wilderness System represents only two per cent of the total land area of the United States. Surely this isn't too much to preserve permanently as unspoiled wilderness."

Speaking to this argument at the Seattle hearing on the bill by the Senate Committee on Interior and Insular Affairs, William D. Hagenstein, executive vice president of the Industrial Forestry Association, asked, ". . . But have they ever told the people of the state of Washington that the system would grab nearly 17 per cent of all their federal lands? Or the people of California, 12 per cent of theirs? Or the people of Montana, 15 per cent of theirs? Or the people of Wyoming, 16 per cent of theirs? Or the people of Arizona, 12 per cent of theirs? Or have they told the people of Jefferson County, Washington, that S. 1123 would make permanent wilderness of 46 per cent of their total land area?"

This doesn't mean that wilderness should not be one of our important land uses, Mr. Hagenstein said. "We think it should be. But it is unsound land management policy to establish any permanent wilderness until adequate land-use studies have shown that such reservation can be made without impairing the needs of our growing population for more jobs and commodities."

In expressing the conviction that we have all the basic federal laws needed for management of the western federal lands, Mr. Hagenstein warned that, "To impose a special-use system for some of our federal lands, as proposed by S. 1123, is unwise public policy. If enacted, it will lift the lid off a political Pandora's Box which will trigger movements for other single-purpose land dedication for forestry, mineral development, mass recreation, grazing, and water production—all to the detriment of the sound multiple-use land policy under which the government is now managing most of its western lands. This will decrease our ability to get the most out of these lands for most of our citizens over the longest period."



William D. Hagenstein

Any modification of federal land management policy, such as proposed by S. 1123, will have a significant effect upon many local economies, Mr. Hagenstein said. Putting 50 million acres behind wilderness boundaries with their implicit "no use" signs will lessen job opportunities, reduce value of people's homes, and destroy small businessmen in community after community throughout the West.

"This is economic suicide for a country with a growing population which needs more jobs and more products," he said.

Mr. Hagenstein also put his finger on another development that has accompanied the campaign to enact the Wilderness Bill—namely a deep-seated feeling of uneasiness on the part of many people that proponents of the bill are not greatly interested in the "wise use" philosophy of management as enunciated so forcibly by Theodore Roosevelt and Gifford Pinchot.

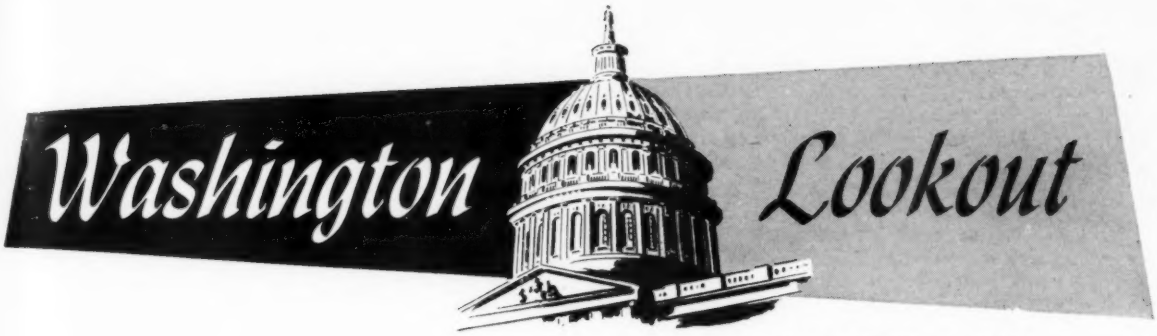
"After listening to the proponents in the 1958 hearings, I came to the unmistakable conclusion that they differed markedly from those of us arguing for continuation and expansion of present federal multiple use policies," he said. "They talked as though they were against management, protection, and use of natural resources, while we acknowledged the legitimate place of wilderness in our land-use scheme. Theirs was an extreme viewpoint; ours moderate."

Another spurious argument advanced by the bill's proponents, Hagenstein said, is that 50 million acres of roadless wilderness will enhance the tourist business. "This utterly ignores that half our tourists are our own residents. Before a resident can be a tourist in his own state, he must have a job. In the West, that means increased use of natural resources to provide more jobs for more people. All our western states are using four-color national advertising, at taxpayer's expense, to attract out-of-state tourists. And here we are talking about a proposal which would deny them enjoyment of many of our scenic wonders because they couldn't be reached by roads. How, then, can the proponents cling to this exploded argument that unproductive wilderness over millions of acres is good for our economy?"

The onus of proving, with facts and figures, that S. 1123 will not harm the western economy, area by area, state by state, is on the backs of the proponents, Hagenstein said. "Neither last year nor before have they made a case for this legislation."

In tracing the history of the public land laws, the witness said that despite all the latter-day criticism leveled at those laws, "They served

(*Turn to page* 49)



By ALBERT G. HALL

THE PROPOSAL FOR AN OREGON DUNES NATIONAL SEASHORE, introduced as S. 1526 by Senators Neuberger and Morse and as H.R. 6260 by Representative Porter, all of Oregon, is raising a question as to how far the federal government should go in developing recreational areas. The 35,000-acre seashore park proposed by the members of the Oregon delegation would involve the giving of park status to 13,115 acres of federal lands including national forest, 522 acres of state-owned lands now in state park status, 320 acres of county-owned lands, 14,963 acres of privately-owned lands, including a substantial part (3,000 acres) of Crown Zellerbach Tahkenitch Tree Farm, and 4,250 acres of freshwater lakes. Local interests are divided on the question. Both industry and recreation income loom important to the Oregonians, and there are those who believe that seashore development in Oregon should be left up to state and local interests, among whom local problems of land use should be solved. Others feel that most seashore areas in the United States have already been taken over by private and local development and that the national interest will best be served by federal acquisition and control of the Oregons Dunes (and other remaining undeveloped areas). The Oregon area would be stretched out along 24 miles of coastline and vary in depth back from the beach from 1 to 6 miles, thus assuring access from public highways and space for development of recreational facilities, and to serve as a buffer strip. Public meetings have been held in the affected area, with the National Park Service sending its chief of recreation resource planning, Dan H. Thompson, to explain the program. The National Park Service has indicated that national seashore establishment is an objective of its long-range program. Further to complicate the decisions which are now being made locally, it is reported that Pacific Power & Light Company has spent two years studying the possibilities of fresh-water yields of deep wells in the dunes. It is believed that sufficient water can be developed to supply at least one large pulpmill to enhance the economy of the area.

LEGISLATION TO PROTECT STATE AND INDIVIDUAL WATER RIGHTS against federal pre-emption has been introduced by seven senators and five representatives. Backed by the state legislatures of Utah, Alabama, West Virginia, and Indiana, and by a number of regional and national organizations, including the American Farm Bureau Federation, the various measures are designed to undo the federal supremacy theory in water rights which has been advanced by the Supreme Court and by the Department of Justice. Basic purpose of the proposed legislation is to confirm the states as trustees of water within their boundaries. Over the years, state laws have resulted in water rights being assigned to individuals or communities by state water authorities. Federal agencies, backed by recent Supreme Court decisions, have in effect overruled state laws in regard to water appropriation. The proposed legislation, if enacted, will require the federal government to abide by the laws of the states in matters affecting water, including water that rises on lands reserved for federal purposes. In the Senate, S. 1416 has been introduced by Senators Moss and Bennett of Utah, Case and Mundt of South Dakota, Martin of Iowa, Dworshak of Idaho, and Hruska of Nebraska. Companion bills in the House have been introduced by Representatives Rogers of Texas, King and Dixon of Utah, Morris of New Mexico, and Grant of Alabama.

HOUSE ACTION ON THE FORESTRY APPROPRIATIONS has followed rather closely the recommendation of the President's budget (see tabulation of budget request items in the March issue of AMERICAN FORESTS). For the Forest Service the House-

(Turn to next page)

passed appropriation bill includes $129,813,000 in regular appropriations, an increase of $1,613,000 over the budget request. The increase results from an addition of $2 million by the House for forest roads and trails (bringing the total for roads and trails to $26 million). On other items, small amounts were pared from each activity because of minor disallowances of salary increases made necessary by the pay act of last year. This will mean that some vacancies in personnel may not be filled; but essentially the Forest Service program will continue at the budgeted level. The House approved $24,323,000 for land and resource management functions of the Bureau of Land Management, Department of the Interior. The BLM budget was also cut by reason of pay act disallowances, for a total cut of $54,000. The BLM figure included an increase over last year's appropriation of $145,000 for fire protection contracts, and $301,000 for cadastral surveys in Alaska. The budget estimate of $5,200,000 for timber access roads on revested Oregon and California Railroad grant lands was approved. For resources management, Bureau of Indian Affairs, the House voted $21,873,000, a reduction of $552,000 from the budget request. Management and protection of Park Service lands was voted $16,297,000, a decrease of $703,000 from the budget request.

SUPPLEMENTAL APPROPRIATIONS TO FINISH THE CURRENT FISCAL YEAR were approved by the House, as follows: $13,389,000 for the Forest Service, of which $5,432,200 is a transfer from the Conservation Reserve. This will provide for the full request of $8.5 million for fighting forest fires, and take care of most of the statutory pay increases. Supplemental funds for the Bureau of Land Management, as approved by the House, total $3,582,600, which includes the full request of $2.5 million for fire-fighting costs on public domain lands in the western states and Alaska. An additional $200,000 was approved for fire-fighting costs of the Park Service.

THE NATIONAL OUTDOOR RECREATION RESOURCES REVIEW COMMISSION has announced appointment of the members of its advisory council of 25 persons as required by Public Law 85-470 establishing the commission. Members are: Horace Albright, New York; A. D. Aldrich, Florida; Harvey O. Banks, California; Andrew J. Biemiller, Maryland; James Lee Bossemeyer, Washington, D. C.; Harvey Broome, Tennessee; A. D. Brownfield, New Mexico; Kenneth Chorley, New Jersey; Mrs. Harold Christensen, Utah; Kenneth R. Cougill, Indiana; Ward Duffy, Connecticut; David L. Francis, West Virginia; Ira N. Gabrielson, Virginia; Pat Griffin, Colorado; Luther Gulick, New York; Mrs. Oveta Culp Hobby, Texas; Charles E. Jackson, Maryland; Joseph E. McCaffrey, Alabama; Dwight Fox Metzler, Kansas; DeWitt Nelson,California; Lloyd Partain, Pennsylvania; Joseph Prendergast, New York; T. J. Rouner, Massachusetts; David Shepard, New York; Gilbert White, Illinois. The advisory council will assist the commission in planning the study of recreational potentials of both public and private lands, and will review such recommendations as are made toward establishing and meeting outdoor recreational objectives. A supplemental appropriation of $350,000 was requested by the President for the work of the commission this year. The request was denied by the House Committee on Appropriations, but $100,000 was voted when the supplemental bill was acted upon by the full House.

LOUISIANA FORESTRY ASSOCIATION announces that James H. Kitchens, Jr., its executive director since 1951, will enter private industry on June 1 with the forestry division of the T. L. James Company of Ruston, La. He will assist in directing the company's reforestation program in Louisiana. Kitchens had been with the Louisiana Forestry Commission for eleven years before being named to the association post. It is believed that his place with the association will be filled by Ed Kerr, former press representative for the Louisiana Forestry Commission, who was named assistant executive secretary of the association early this year.

ABOUT ONE BILLION BOARD FEET OF TIMBER will be available from the revested Oregon and California Railroad grant lands in western Oregon this year, as a result of an increase in the annual allowable cut. The Bureau of Land Management, following additional progress in its inventory of around 2.5 million acres of O & C lands, has raised the annual allowable cut—the amount that can be harvested under sustained-yield principles—to 874.2 million board feet. An estimated 125.8 million of salvage and other timber not chargeable to the allowable cut base will also be offered for sale. The annual allowable cut has been successively raised from 500 million board feet in 1937 to its present all-time figure.

Editorial

National Forests Use: Privilege or Right?

In the opinion of some AFA members, the Forest Service made an error in judgment when it gave the nod to inclusion of a clause recognizing sustained yield and multiple use in the Wilderness Bill. This move was precipitated during the scrap over the disposition of the Klamath Indian timber when certain proposals by the lumber industry were interpreted to mean it might be attempting to weaken present provisions in the Secretary's regulations governing allowable cut on the forests. Sustained yield, being a comparatively new development in forestry, is not recognized as such in the organic act creating the national forests, although it is covered in the Secretary's regulations.

While strong for sustained yield and multiple use, some AFA members believe that the present provisions covering the forests are sufficiently broad and that the Service's move could be interpreted to mean it is fearful present regulations don't have sufficient teeth to meet mounting pressures. To go one step further, the move could be interpreted to mean the Service has been operating illegally on the forests for a number of decades. This we do not believe and moreover, the public, which has always supported national forest programs, is not likely to believe it either. The strength of the forests rests primarily on the will of the American people. The people believe in these forests and they believe in Forest Service programs. No artful dodges by special groups in interpretation of broad powers given to the Service are likely to alter the status quo in this respect.

Even more serious in the opinion of some is that in giving the nod to insertion of the clause in the bill, the Service indicated its willingness to play ball, despite its reservations, with a bill it has absolutely no right to support in its present form if it intends to stick by its multiple use guns and fairly represent all the American people. Here is a bill that grants special legislative privileges to a special kind of use in perpetuity. Here is a bill that proposes a built-in lobby to be supported by the taxpayers in the form of a Wilderness Council. Hard battles have been fought over this issue in the past. The record shows that AFA has emerged triumphant from more than one battle with the stockmen after upholding the principle that use of the forests is a privilege, not a right. The fact that the present attempt is being waged by a different type of special interest composed of unselfish, idealistic people does not alter the issue in the slightest degree. That issue, once again, is whether use of the national forests shall continue to be a privilege or a right.

What does AFA's Board say about it? In its resolution of July, 1956, the board said in part, ". . . Obtaining the maximum of economic and social services, i.e. the greatest good for the greatest number in the long run, requires that multiple uses must be considered. The relationship of these uses to one another and to the over-all welfare of the nation has to be determined by those concerned. The present generation must evaluate present priorities with due regard for the best interests of future generations. But the present generation cannot deny its descendents the right to use all inherited resources for fulfillment and protection of their own needs. To do so defeats the basic concept of multiple use."

Multiple use management by trained administrators or single use by legislative fiat: That is the choice. In playing on the harp of public opinion, proponents of the bill have developed a sense of urgency, a sense of imminent loss of wilderness areas, when the fact is we have more wilderness areas on national forests today than ever before. Honest people are being "conned" into the belief that unless we lock up these wilderness areas for keeps, "all will be lost"—a philosophy enunciated by individuals who have apparently developed a deep-seated mistrust of scientific management on national forests.

Certainly multiple use—the art of managing forests, water, soil, wildlife, and recreation for the greatest good of the greatest number in the long run—is being challenged today as it has never been challenged before. Even as AFA leaders look hopefully to Congress to reject this unwise bill, a new study in New Mexico, liberally supported by stockmen, is apparently being readied for a last-ditch attempt to redeem the public lands plank stockmen inserted in President Eisenhower's first platform. This modest proposal would turn over upwards of 200 million acres of public domain grazing lands to the states, making sure that sale of individual tracts would *give priority to present users*—single use any way you slice it, and a land grab to boot. Out in California the Sierra Club, which supports the Wilderness Bill, also supports a move to turn the bulk of national forest wilderness areas over to Interior—a move that in our opinion would not prolong their longevity as wilderness areas compared to management under the national forests banner, but which would still be preferable to the Wilderness Bill if a choice had to be made. But here again, another single use gambit.

Up to now the Forest Service has been extending the velvet glove of conciliation to these various proposals, but individual Americans who own their own share of stock in these lands may soon start wondering why their trustees on the lands don't begin defending their interests in more vigorous terms. Looking back over 50 years of history, AFA finds that the public, in the final analysis, has always ruled that these forests belong to *all* of us and not to any one clique. To spell out in letters of fire that use of these forests is a privilege and not a right, we believe the time may well be at hand to call a Fifth Forest Congress to rededicate ourselves to basic principles in which we believe and to keep faith with those who have gone before.

We have come too far in 50 years in developing scientific management of our forests, soil, water, wildlife, and recreation resources to risk upsetting a good pattern of management now. To continue that pattern the integrity of the national forests must be preserved.



L. E. Partain, president of PFA, sponsor of the contest



Pupils in the 2nd Grade, Central School in Springfield, Penna., study raccoon bulletin



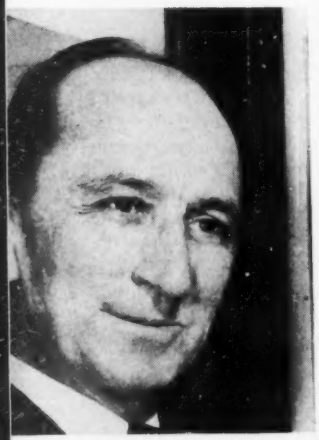
Junior members of Southeastern Penna. Garden Club Federation help classify entries.



Howdy the Raccoon—An

By LLOYD E. PARTAIN
President, Pennsylvania Forestry Association

Somerset's Good Outdoor Manners Com. (l.) D. Heyl, W. M. Brion, E. W. Cox, V. E. Erickson, J. A. Bochy, M. C. Jones, J. B. Zimmerman, W. H. Ringler, K. P. Catterall, K. G. Thomson, L. S. Williams



Arthur C. McIntyre, project director for contest





Class project of the 6th Grade, Central School, Springfield, was group participation in selecting a name for symbol of Good Outdoor Manners project

Another Forestry First

FOR several months now the friendly little animal on this month's cover has been known by many different, interesting and important names. Most of the name-giving has been done by more than 450,000 of the 2,000,000 school children in Pennsylvania. No accurate count is possible among the youth of neighboring states, but correspondence to the Pennsylvania Forestry Association and to the newspapers, radio and television stations assisting in the "Name the Good Outdoor Manners Raccoon Contest" indicates that many of these out-of-staters would like to have been eligible to enter their choice of names in the competition.

The raccoon now has a name. It is "Howdy," finally selected by the Board of Judges in Harrisburg on April 20.

He and his slogan have been copyrighted, and a trademark registration has been applied for designating him as the symbol of the Pennsylvania Forestry Association's most extensive educational project—"Have Good Outdoor Manners."

Here's how it all came about. As is true with so many worthwhile events and activities, there is a very real problem back of it all: population pressure on use of our natural resources, or as certain authorities have described it, "competition for space—land space and water space." No doubt this is an ever-increasing problem throughout the nation, but its greatest severity is in the more populous areas such as the Keystone State. Even though our heavy population continues to zoom, we have been able to better than hold our own in acreage of the original Penn's Woods remaining in trees. Forest acreage has actually increased in the state in recent years. Nearly 53 per cent of our land area presently grows trees. These acres as well as those devoted to all other uses simply must be made to satisfy the rapidly increasing wants and needs of more people. This is true of farm land, urban land, state forests and parks, fish and game areas, our Allegheny National Forest, industrial lands, highways and byways. At the same time land, forests, water, and wildlife must be protected to the fullest extent possible. These resources must be conserved and wisely used to maintain a strong economy and full employment as well as enjoyment for our people. The demand is for more intensive production from the land and water on the one hand and a skyrocketing recreational use on the other. In short, we are faced with great human pressure for old as well as new uses for a fixed area of land and water. For this reason it has been agreed by all concerned that people need a fuller appreciation of our great outdoors and the joys and benefits it will give them in return for regard, respect, and timely action on their part. It all seemed to be wrapped up in those four forceful words, Howdy's slogan, "Have Good Outdoor Manners!"

It was more than a year ago that the problem narrowed to this general concept. We had learned from numerous sources and were told by many authorities that this was a very high priority problem needing a solution, if one could be found, as soon as possible. Facts reported by The Hon. Maurice K. Goddard, secretary of the Pennsylvania State Department of Forests and Waters, point up the need for action. He said:

"Unless we plan ahead, free time could become a drug on the market and a drag on the mind. We don't know all the things people will do with all their leisure time. But we do know one of the things people are doing now, and in increasing numbers—taking to the woods and heading for the parks, the streams and the lakes. It's a fact that more and more people are spending more and more time in parks of all kinds.

"It is up to the individual to decide what he does with his non-work time. But it is up to us who have an interest and a responsibility in natural resources planning and development to see that our parks are updated to meet today's demand and tomorrow's requirement. We need all the help that can be made available in getting this big job done.

"We haven't yet caught up with the impact of the new leisure we've been given within the last ten years. Our park facilities today might be adequate for conditions which existed 20 years ago, but they haven't kept pace with the requirements of people today.

"Every year the use of our state park system increases. Not counting our 'commission' parks in Pennsylvania, here are the facts on the use

of our state parks in recent years:

Year	*Attendance*
1951	3,993,494
1952	5,986,948
1953	7,451,758
1954	8,949,422
1955	9,057,137
1956	9,488,480
1957	11,576,548

"Total attendance during the calendar year of 1957 in state parks administered by the Department of Forests and Waters, including the various Commission Parks, reached a total of 20 million."

This represents something like an average of two visits to state parks for every person in Pennsylvania.

Sportsmen are making extensive use of our forests, fields and waters. During the last two years, according to current records of the Pennsylvania Department of Forests and Waters, the Fish Commission, and the Game Commission, there were more than 700,000 hunters on state forests and about 600,000 fishermen fished our streams.

Moreover, 4,250,000 visitors went to the woods to enjoy autumn colors, the spring blossoming of rhododendrons and azaleas, and other scenic areas. (This number is in addition to visitors to state parks.) Additional hundreds of thousands frequent private farm and forest lands and municipal parks and playgrounds to enjoy the outdoors.

The Pennsylvania Forestry Association garnered other facts from many sources. We had come to grips with a very serious deer problem in the state—one of over-population resulting in the herd because of lack of food. Starving deer had played havoc with forest regeneration in many areas. Sportsmen's groups, farmers, forest land owners, and state agencies and institutions showed increasing interest and effort toward the solution of this phase of a combined wildlife, recreation, and land management problem. Its seriousness was most pronounced in the damage to farm and tree crops and in highway safety. Not only property but human life is endangered when too many deer meet too many automobiles.

We know that more of our open land areas are soon to be devoted to new homes, industrial sites, reservoirs, recreational developments, and highways. Our present Pennsylvania Turnpike occupies 25 acres for every mile of its length, but specifications for the new interstate highways, totaling 1500 miles, will change the use of another 75,000 acres of Pennsylvania land—almost 120 square miles, much of which has provided food and cover for deer and other wildlife up to now. Other forces competing for space and changed use of our resources were studied.

The Pennsylvania Forestry Association's Board of Directors had by resolution adopted a Resource Development Program for the Commonwealth in 1955. This followed a full year's study by a committee representing broad interests.

One portion of the recommendations on implementation of that program reads as follows, ". . . . increase the knowledge of school children in the basic fundamentals of natural re-

(*Turn to page* 58)



Laurance S. Rockefeller, chairman, National Outdoor Recreation Resources Review Commission (right) and Francis W. Sargent, director of program

Rockefeller to Address AFA

Howdy the Raccoon will be a star attraction at the 84th Annual Meeting of The American Forestry Association October 11-14 at the Bedford Springs Hotel, Bedford, Pennsylvania. According to Lloyd E. Partain, president of the Pennsylvania Forestry Association, winners in the "Name the Good Outdoor Manners Raccoon Contest" will be honored at Bedford Springs as part of the association's "Good Forest Manners" campaign. Theme of the convention will be "Resources and People—A Problem in Co-Existence."

The Honorable David L. Lawrence, Governor of Pennsylvania, will officially welcome AFA to the state. More than usual emphasis this year will be placed on the recreational aspects of the forest, and Laurance S. Rockefeller, chairman, National Outdoor Recreation Resources Review Commission, will be guest of honor at the annual banquet the evening of October 13. Chief Forester Kenneth B. Pomeroy, of AFA, will present the association's "Trail Riders of the Wilderness in Full Color," as a special feature.

Speakers on the slate include Dr. Eric A. Walker, president, University of Pennsylvania; Conrad L. Wirth, director, National Park Service; Dr. Harold G. Wilm, commissioner, New York State Conservation Department; Arthur W. Greeley, assistant chief, Forest Service; Dr. S. T. Dana, dean emeritus, University of Michigan; Vertrees Young, director, Crown Zellerbach Corporation; Dr. Maurice K. Goddard, secretary, Pennsylvania Department of Forests and Waters, and others.

An all-day field trip ending with a visit to Shawnee State Park for an ox roast is scheduled for October 14. The roast will be followed by an old-fashioned barn dance and hoedown. Post-conference tours are scheduled to the Davis Watershed, the Pocono Mountains, Potato City, and the Brandywine Valley.

BEAR FACTS



By DAVE MECH

ONCE upon a time there were three bears: #B54, #B55, and #B56. This version of the old story is the result of an intensive ear-tagging project administered by Cornell University's Department of Conservation. Over 200 black bears in New York are now adorned by tags with identifying numbers. These bears have had their weights and measurements checked by wildlife biologists at least once, and many have been rechecked.

It all started when the New York State Conservation Department suddenly realized that its wildlife experts knew little about the black bear. Although bruin is the subject of one of our most famous bedtime stories and is one of the best known wild animals, little basic information is really known about him. Therefore, the Conservation Department contracted Cornell University to discover the bear facts.

Information the biologists wanted included three main objectives. Data on range and movements, growth rates, and reproduction were needed. This would mean weighing and marking a number of live bears and rechecking them. There was just one catch—how could this be done?

Hugh C. Black, student leader of the project, after intensive thought and much reading, came up with an ingenious plan to live-trap and ear-tag the critters. This plan included some of the most modern methods of wildlife research. It meant catching bears entirely unharmed, anesthetizing them and keeping them "out" while they were weighed, measured, and ear-tagged.

This plan turned out to be more practical than it sounded. In the Adirondack Mountains are several garbage dumps which during the tourist season are visited by five or six bears. They are easily captured in a large "box trap" constructed of an 8′ by 3′ piece of culvert pipe with a sliding door at one end. Enticed into the trap by a pound of smoked bacon, the bear becomes trapped when he pulls the bait, causing the door to fall shut behind him. The trap is built so that before the door is released, the bear must be completely inside, and there is no chance of his being hurt. Once the bear is caught, he realizes that there is no escape and remains quiet.

Ether is easily sprayed into the "bear can" until bruin is off to dreamland. Trained biologists know when the bear is unconscious enough to be removed. Since this anesthesia is rather temporary, a pail containing ether-soaked cotton is kept near the bear's head; as soon as he starts to regain consciousness, he is put back to sleep. Constant vigilance of the bear's state of anesthesia insures safety of both biologists and bears.

After anesthetizing the bear, the biologists put a metal cattle tag into each ear; one tag insures identification if the other is lost. The numbers on each are carefully recorded so that if the bear is retrapped he can be identified, and his weights, measurements, and catch location can be compared. In this manner the range and growth rates of the black bear can be determined.

The manner of weighing the bear is also interesting. The four feet are loosely tied, and the bear is hoisted with a pulley to an accurate pair of scales mounted on the back of a pickup truck. These scales weigh any bear up to 600 pounds, which is usually sufficient. However, once a record 605-pound bear had to be weighed on two scales at the same time, the weights being added.

(*Turn to page* 48)



Tagged bear looks back at his captors

Numbered tag is attached to each ear





Expanded research in forest genetics is necessary to produce better trees



Ranger uses water speed measuring device in studying fork of Cherry River



Erosion control is included in proposed soil survey of 33 million acres

Improved fire control measures would curtail this drastic threat to timber



NATIONAL FORESTS

TO millions of Americans, the 181 million acres comprising the national forests represent the great anchor to the windward on which the nation's resource strength rests. The fact that there is practically no argument in Congress as to the importance of these forests in the nation's resource scheme is a solid reflection of the personal interest the public takes in these reserves—an interest that is a source of pride to some and a source of bafflement to others, and which, so far as we can learn, is unique in human history. Indeed, in reviewing the land history of nations long gone, it seems little short of miraculous that the forests have withstood all onslaughts for a half a century and remain virtually intact.

At the same time, half a century represents a flicker of an eyelash in the course of history, and students know full well that events and pressures could still undermine the basic integrity of the forests unless they meet the needs of the present and prepare for the needs of the future. Accordingly, the sponsors of two consecutive Programs for American Forestry, approved by The American Forestry Association, are pleased to learn that the Department of Agriculture is moving to bolster the management plans on the forests and that their proposals are already being given a sympathetic reception by Congress.

Assistant Secretary of Agriculture E. T. Peterson is being given credit in Washington for spearheading and following through on a comprehensive plan to improve the efficiency of the forests that was sent to Congress last month by the President as approved by Secretary of Agriculture Benson. If activated, the program will represent a giant step forward for every aspect of national forest resource development. For thousands of communities, the plan could mean greater use, fuller enjoyment, and expanded wealth from these vital, renewable resources: water, timber, recreation, wildlife habitat, and forage.

No cost estimates were incorporated into the Administration's proposal, but in hazarding a calculated guess, the proposal would probably treble national forest income in 15 years and double the present appropriation for the Forest Service in the same period of time. In speaking about this cost factor, Senator James E. Murray (D. Mont.), chairman of the Interior and Insular Affairs Committee, said, ". . . I am sure I speak for all the members of our committee when I say that this entire message of the President will be given full and and careful consideration by the Congress. It should be recognized at the outset, however, that many of the program needs do not require special legislation but merely the appropriation of funds, or to put it more precisely, the investment of funds. The executive branch has the facts, and it is my hope that as we proceed it will show its dedication to conservation *with realistic budget requests* for these natural resources so important to our nation's future well-being."

Just what does the program propose to do?

Under the program, the renewable resources of the national forests would be more fully used; the public forests would become more productive and continue to produce for all time, having each resource in harmony with the other. This is the basic multiple-use policy. Such use is essential, since large segments of agriculture and industry depend for their existence on water flowing from national-forest watersheds; hundreds of thousands of people earn their livelihood processing timber grown on national forests; millions of domestic livestock graze on national-forest ranges; and many millions of people seek the national forests for rest, relaxation, and spiritual uplift.

The program sets up long-range objectives looking to the year 2000.

An interim action program, concerned with what needs to be done in the next 10 to 15 years, meshes with the long-range objectives while meeting current needs.

Highlights of Program Goals for the Next 10 to 15 Years:

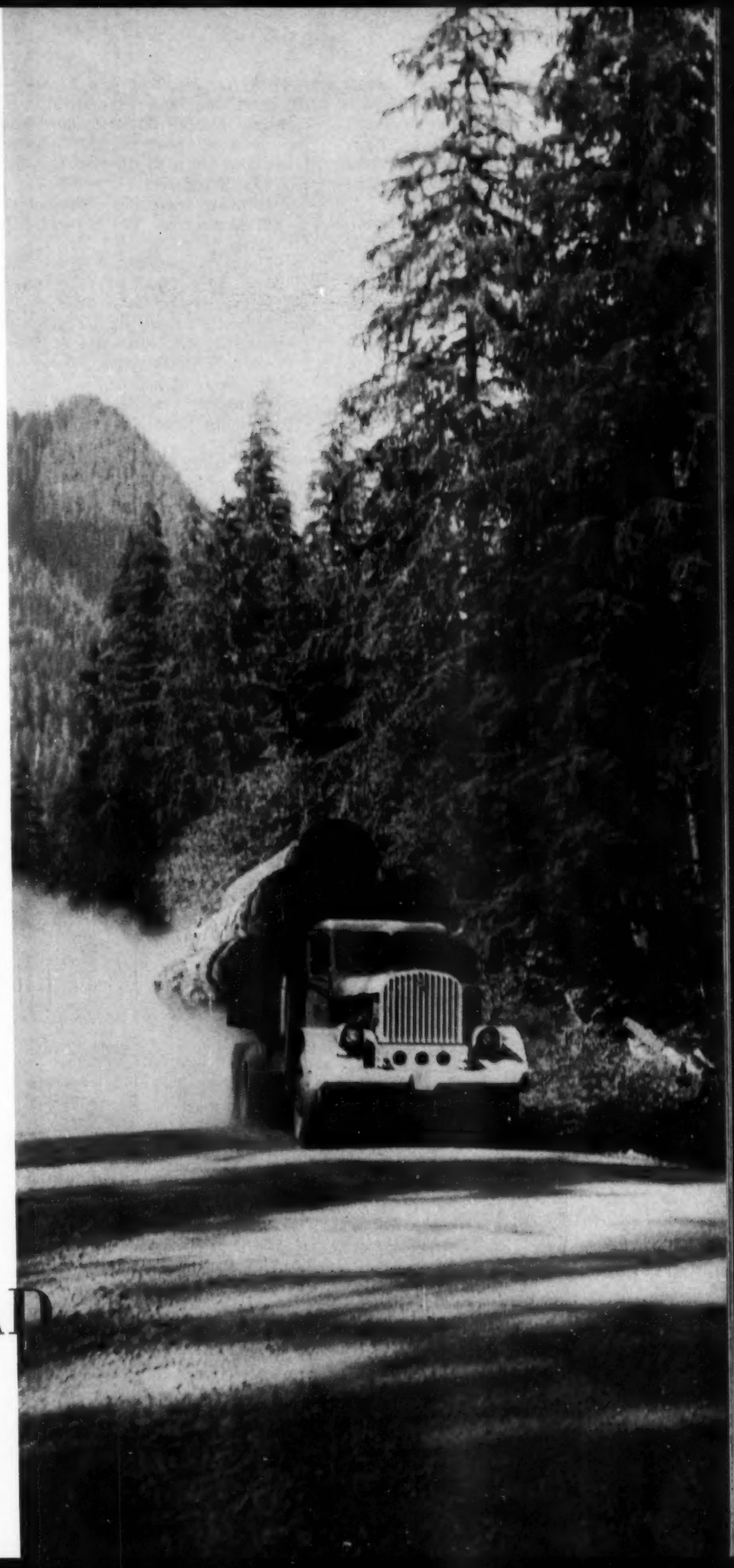
Resource Management and Development

1) *More and Better Water*—Step up watershed management and protection to increase the quantity and improve the quality of water yields. Major projects:

Initiate field inventories of water supplies.
Complete soil surveys on 33 million acres.
Stabilize 10,000 miles of gullies and channels.
Control sheet erosion on 1.3 million acres.
Stabilize 20,000 acres of dunes and blowouts.
Control erosion on 14,000 miles of roads and trails.
Build 535 upstream flood control structures.
Control stream pollution on 170 projects.

2) *More Wood for the Nation*—Increase annual harvest from 7 to 11 billion board feet, through intensified sustained-yield management of present timber stands; growth of more and better trees; reduction of disease, insect, and fire losses; and improved utilization. Major projects:

Increase salvage and sales of stagnant timber stands and dead, dying, and diseased trees.
Develop and apply on timber sale areas higher standards of regeneration, hazard reduction, salvage, and erosion control.
Make up-to-date inventories for commercial forest lands and complete timber management plans for all national forests.
Seed or plant 3.3 million acres.
Improve 11 million acres of young timber stands by pruning, weeding, thinning, and



LOOK AHEAD

planting recently-burned areas.

3) *More Recreation for More Millions*—Meet the needs of an expected 130 million annual visits by 1969, almost double the 68.5 million visits in 1958. Complete "Operation Outdoors." Major projects:

Maintain and expand approximately 5,000 improved recreation areas already developed.

Construct and maintain 10,000 new camp and picnic areas, which will contain 102,000 family units.

Improve sanitation, cleanup, and public safety of all recreation areas.

Step up protection of wilderness, roadside, and other special areas.

Complete the inventory and evaluation of recreation resources in cooperation with the Outdoor Recreation Resources Review Commission.

4) *Better Hunting and Fishing*—Accommodate the dramatically increasing number of Americans seeking outdoor sport on the streams, lakes, and trails of the national forests. Major projects:

Improve food and cover on 1.5 million acres of key wildlife areas.

Develop openings, food patches, and game walkways in dense forest and brush stands.

Stabilize banks, plant cover, and improve the channels of 7,000 miles of fishing streams and 56,000 acres of lakes.

Complete wildlife habitat management plans for all national forests.

Strengthen cooperation with the state game and fish departments.

5) *Better Range, Better Grazing*—Improve range resource to achieve sustained high-level forage production and better watersheds through intensified management, better range practices and better balance in range use. Promote individual and community stability. Major projects:

Construct 18,000 miles of fences and 9,500 water facilities.

Bring forage capacity and range use into balance as rapidly as practicable.

Restore desirable vegetation and control poisonous plants on 4.4 million acres.

Complete and keep current range analyses and management plans on all grazing allotments.

Supporting Activities

6) *Accelerated Research*, on a broad scale, will be required to guide and support the resource management and development program. Forestry research would expand in such fields as forest genetics to pro-



Higher standards of regeneration, hazard reduction, and salvage are necessary on timber sale areas

Forest Service crew plants Ponderosa pine on the Escudilla burn where 19,000 acres were destroyed





Fishing and boating facilities are available on forests but not enough to accommodate increasing number of users

Camping in clean, crisp air of high mountain country amidst such superb scenery is a delightful family outing



duce better trees; forest cutting practices to protect and increase streamflow; finding new uses for low-quality timber; protecting forests from insects, disease and fire. Other major projects:

Provide 17 specialized laboratories and related facilities for basic research in many fields, including forest soils, forest products, tree physiology, and new equipment for fighting fires and for harvesting timber.

Construct five regional office-laboratory buildings at experiment station headquarters, 25 office-laboratories at field research centers, and minor structures and other installations on about 100 experimental forests and ranges.

Develop better range management practices to increase forage yields and protect watershed values.

Develop new methods to improve wildlife habitat.

Study national-forest recreation use to determine needs and preferences in development and management of this resource.

7) *Intensified Protection* will be needed to safeguard present national-forest values as well as planned future investments. This will call for additional measures to prevent, detect, and control forest insects and disease, and improved equipment and techniques for fire control. Major projects:

Insects and Disease. Increase over-all protection effort 50 per cent.

Extend control of white pine blister rust to an additional 250,000 acres.

Initiate a program to control dwarfmistletoe on 6 million trees a year in young stands of softwood sawtimber.

Speed up coordination of timber harvesting with pest control objectives to reduce infection and losses in old-growth stands.

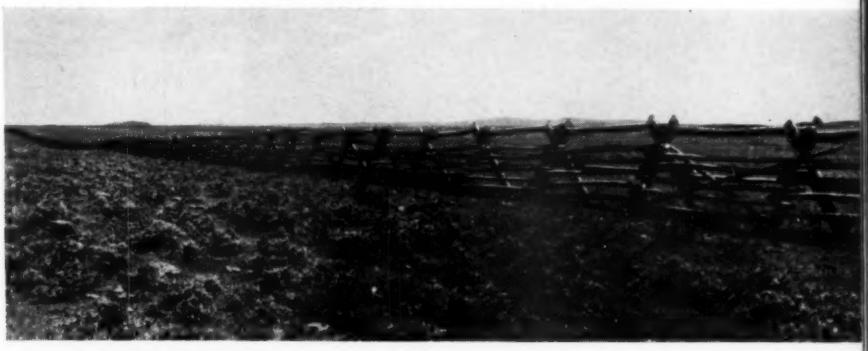
Fire. Expand national-forest protection to meet the "worst year" fire situation on lands proposed for intensive use—from the present 23 million acres to 125 million acres. Intensify protection on an additional 15 million acres to meet the average yearly fire situation.

Further modernize prevention and suppression techniques by doubling present effort.

Treat over 4 million acres of high fire-hazard areas to prevent the start and spread of large, destructive fires. This includes: clearing heavy debris, by burning, on 300,000 acres; felling snags on 320,000 acres to prevent lightning fires; removing

(*Turn to page* 44)

Fences are of tremendous value in securing fullest use of the range forage, and distribution of stock





Forest Service is trying to balance forage capacity and range use as rapidly as possible

It is estimated that 9,500 water facilities must be constructed to adequately maintain grazing livestock





Trees of every size have been killed by maple blight, ranging from seedlings to mature trees



Sugar maple in last stage of death from maple blight. Many young maples too small to market have also died

MAPLE BLIGHT · *A NEW F*



Tree samples are tested in attempt to find an answer to the blight problem

TIMBER owners may have a new fight on their hands. In possible jeopardy are millions of acres of valuable sugar maple throughout the northern United States. It all started with the sudden death of thousands of sugar maple trees in Florence County in northern Wisconsin.

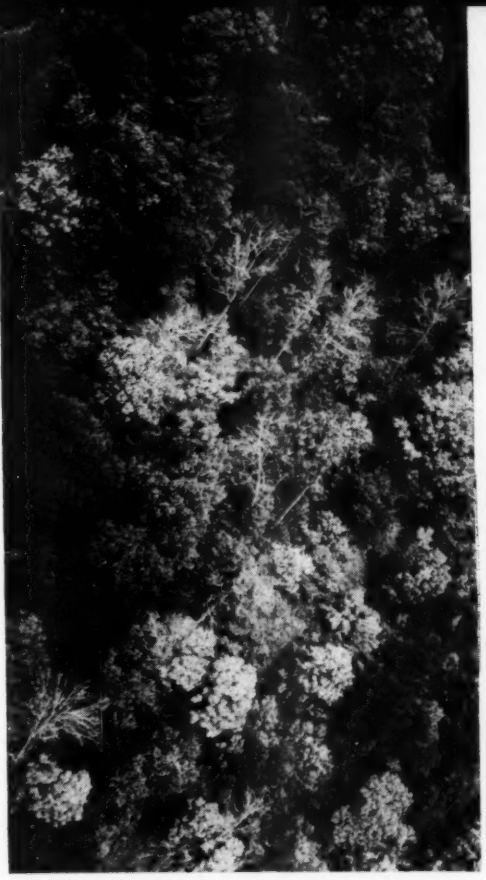
The first alarm was sounded by foresters from Calumet and Hecla, Incorporated, owners of the affected land. During the summer of 1957, the leaves on sugar maple trees began to wilt, then to fall, and the trees died. All sizes, from tiny seedlings to large sawtimber trees, were affected.

John Atkins, chief forester for Calumet and Hecla, brought in a logging crew and began felling the dead and dying trees and hauling them to Calumet's sawmill at Goodman as quickly as possible. Realizing the destructive potential of this new problem, Jack Noblet, superintendent of woodlands and production, called for assistance. The next man on the scene was Stan Banash, an entomologist for the Wisconsin Conservation Department. Banash had been interested in this area for some time. An epidemic of leaf-eating insects had been present since about 1955. These insects had been severely defoliating the sugar maple. Up until this time, no one had been too concerned about these outbreaks because past experience in other areas had shown that sugar maple could lose its leaves for several successive years without lasting injury. Now, however, this defoliation began to take on possible significance.

In the meantime, forest disease specialists at the University of Wisconsin had been asked to help. Jim Kuntz, a forest pathologist for the university, started to investigate the possibility that some disease might be killing the maples. He first ran



After losing their leaves, some trees resprouted from dormant buds. However, such trees may die eventually



Blight-killed timber was located from the air. In 1957 over 10,000 acres of hardwoods were affected

W FIGHT

By D. D. SKILLING

line transects out from groups of dying trees into apparently healthy parts of the stand. Upon returning a few weeks later, he found dying trees in what were assumed to be healthy portions of the stand. The mortality was advancing rapidly.

As the mortality continued, owners of nearby timberlands began to express concern. Was this a local outbreak or was destruction to be on a regional or even national scale? The northern hardwood type, of which sugar maple makes up an important part, covers extensive areas. Over three million acres of northern hardwoods are found in Wisconsin alone. Nationally, northern hardwoods extend over 30 million acres. Any agent that caused extensive mortality in this wood could have tremendous economic importance. Many sawmills depend on sugar maple for their main source of raw

(*Turn to page* 53)

Dead and dying trees were cut at once. More than 1½ million board-feet of timber have been salvaged





Former Interior Secretary McKay welcomed Justice Douglas at conclusion of his famous hike along the C. & O. in 1954

the C and O—Park or

By DANIEL A. POOLE

CONFLICTS arising between national parks and reservoirs are more notable for the vociferous public reaction that is generated than for the number of times parks actually are threatened by water projects.

There has developed over the years an unwritten and widely accepted policy that puts national parks off-limits to water developments. This policy was fashioned for the most part on the omnipresent anvil of public willingness to forge forces to combat the developers whenever a national park unit is linked with a water project.

This time-tested policy now is receiving a thorough plumbing in Washington where, for the third year, a congressional committee is holding hearings on proposals to give national historical park status to the old Chesapeake and Ohio Canal, which skirts the Potomac River along the Maryland shore. A similar proposal cleared the Senate in 1957. Its death in the House the following year climaxed lengthy hearings that carried into the closing hours of the final session.

The major questions that have emerged from the many days of hearings and many pages of recorded testimony, and which still are unresolved by the committee, present something of a paradox. Would Congress, in the face of this unwritten but enforceable policy, cut off metropolitan Washington's source of future water supply if it creates the national historical park? If the Congress refrains from acting merely on the supposition that an economically justifiable water storage impoundment might be recommended for the Potomac near Washington, would all chance of obtaining an adequate park be sacrificed? Or, in recognition of both of those dangers, however nebulous, can Congress write a bill that logically and clearly establishes suitable safeguards for both Washington's water supply and the park?

Those who oppose the historical park and who confess immense interest in Washington's water future actually are professional people employed by rural electric associations and power-producing cooperatives. Park boosters range from traditional national conservation organizations to civic, sportsmen's, nature, and women's associations, and other community groups in Maryland and the District of Columbia.

The C. & O. Canal seldom fails to evoke both surprise and pleasure in those who view it for the first time. From its beginning in Georgetown, a short distance west of the White House, to its end in Cumber-



"FIGHT," DOUGLAS URGES

Conservationists should mobilize again and "fight" to save the C. & O. Canal property from destruction, Supreme Court Justice William O. Douglas told Washington's Wanderbirds Hiking Club last month.

The C. & O. is Maryland's equivalent of New York's Erie Canal, except that its scenery is more picturesque. It runs from Georgetown in the District of Columbia to Cumberland, Maryland, and has become increasingly popular in recent years for recreational purposes. Four years ago Douglas focused public attention on the canal by hiking from Cumberland to Washington in an effort to stave off a proposed highway that conservationists claimed would ruin the canal.

"Now the danger is a dam and a monstrous mudflat at River Bend which would flood out 35 miles of the old historic towpath from Great Falls to Brunswick, Maryland," the Justice said.

The Justice challenged two arguments for the dam: 1) that it is needed to store 500 million gallons of water a day to meet the requirements of an estimated population by the year 2000; and 2) that it would generate about 39,200 kilowatts of prime electric power, on which rural cooperatives would have first priority.

Douglas said there are 75 billion gallons of water, more than enough for Washington's future needs, in 20 to 40 miles of fresh water in a wide, deep natural reservoir in the estuary of the Potomac right beside Washington. If River Bend is to be a power dam, it may be one of the most expensive ever built, he added. Douglas also attacked the "pretense" that a reservoir at River Bend would provide recrecreation, particularly if power is involved.

The real value of both the C. & O. and the Potomac River itself, the Justice insisted, is their recreational potential. The proposed C. & O. Canal Park, close to great centers of population, "would be a veritable poor man's paradise," he declared. But conservationists had better get busy in both the Senate and the House and use their vote power if they hope to make the park a reality, he said.

Paradox

land some 180 miles distant, the canal is a wooded strip of refreshing wildness. Giant sycamores, tulip poplars, oaks, and limber-limbed maples isolate it from the world's most important city; and, as it rounds bluffs along the shallow river's edge and cuts inland across alluvial elbows, the canal is a narrow and natural wonderland of forest and water.

The waterway emerged from the successful organization in 1828 of the C. & O. Canal Company, which hoped to promote commerce from Washington to points lying between and beyond Pittsburgh on the Ohio River. Interest in trade with the American West of that era had prompted George Washington to form the Potomac Company in 1785. The company set to work clearing obstructions in the river channel and constructing a short canal on the Virginia shore to bypass impressive Great Falls, some 14 miles upstream from the city. That first canal failed Washington's expectations, but it led to the support of the larger, more ambitious C. & O. project.

Initiated by President John Quincy Adams' shovel of dirt, the first 22-mile stage of the canal was completed in three years. Hampered by repeated delays and increased construction costs, the company finally pushed the canal to Cumberland in 1850, but not before the decision was made to call off plans for continuing across the Alleghenies for connection with Pittsburgh.

As many as 540 barges were in use on the canal in the late 1870's when active commerce was at its peak. Measuring 92 feet long and 14½ feet wide, the mule-powered barges carried 110 to 120 tons of cargo, plus the crews, family members, and spare mules. The bulky boats were raised 605 feet between Georgetown and Cumberland through 74 locks.

Purchased by the government in 1938, the canal, including towpath, seldom ranges more than 150 feet wide, and only 5,253 acres are within the narrow 180-mile right of way. Locks, lockhouses, and the canal bed and towpath have been restored along the first 22 miles between Georgetown and Seneca. Other monuments to early engineering skill and imagination, such as tunnels and aqueducts, remain, although in need of repair in much of the upper section of the canal.

No longer in sight are the blunt-prowed barges that once hung heavy against towlines. In their place graceful canoes glide the waterway, seldom loaded with anything more serious than a picnic lunch or gleeful youngsters. Depending on the sea-

(*Turn to page* 55)



OUR NATIO

IN 1956, The Riggs National Bank of Washington, D. C., published a pictorial story of the Potomac River as a public service. This "portrait" of one of the world's loveliest rivers attracted so much favorable attention in the Washington area that *American Forests* asked for and received the bank's permission to present some of the pictures for its national audience. The result is the series of pictures on the following pages by Ollie Atkins, of *The Saturday Evening Post*, and Charles Baptie, of Washington. In a very real sense, the Potomac, or





The imposing Thomas Jefferson Memorial adorns the southeastern shore of the Tidal Basin which adjoins the Potomac at Washington

The Potomac River rises as a small stream in the Appalachian Mountains near the far southwestern corner of the state of Maryland

ONAL RIVER

the "Pattowmack" as the Royal Charter of Maryland called it, is everyone's river, for it not only flows past the White House doorstep but also is the seat of much of our nation's history. Verdant forests, rich farmland, bustling towns and cities — all are found along its banks. Its recreational potential is almost limitless, but on the dark side is the fact that its pollution problem is such that the Izaak Walton League of America recently announced it would hold no further conventions in Washington until the national river is cleaned up.

Great Falls, lying 15 miles above the Capital, is one of the major waterfalls of the eastern-central seaboard. Through the geological ages Great Falls has cut its gorge back 15 miles from near Georgetown, where it originally spilled over Piedmont Plateau



Ancient last lock of the Chesapeake and Ohio Canal Company at Cumberland, Md., where, in 1850 the 180-mile waterway beside the Potomac was completed. As originally proposed the canal was to extend about 350 miles but many difficulties prevented final completion







The Shenandoah (upper left) joins the Potomac at Harper's Ferry, West Virginia, where three states converge — Virginia (left), West Virginia (center), and Maryland (right). Thomas Jefferson, on a visit in 1801, described how the two rivers "in the moment of their junction . . . rush together against the mountain . . . and pass off to sea"

Little Falls, last rapids in the river, are located just above Chain Bridge and near the District of Columbia boundary line. First bridge built at this point in 1797 was destroyed by fire. The third bridge, supported by chains, has given its name to all succeeding structures

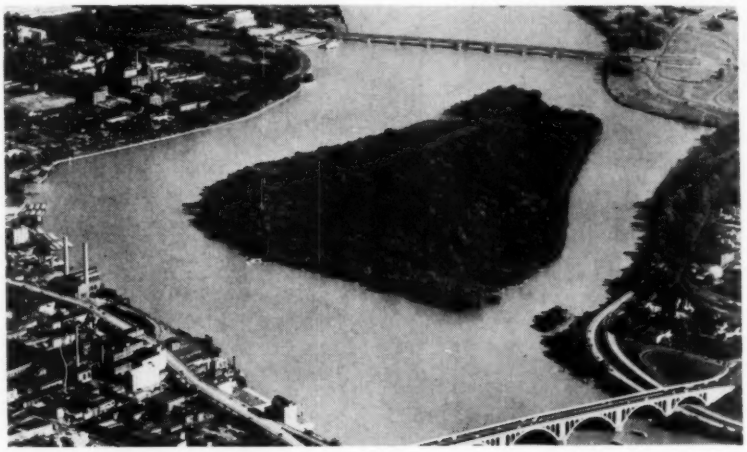


Picturesque houses of Georgetown, D. C. look out upon one of the first locks of the old C & O Canal, long since abandoned for commercial purposes



Finally down to tidewater, some 250 miles from its source, the Potomac flows deeply and quietly beneath the Francis Scott Key Bridge at medieval-appearing Georgetown, D. C. Laid out in 1751, Georgetown was a bustling port until included in capital city design



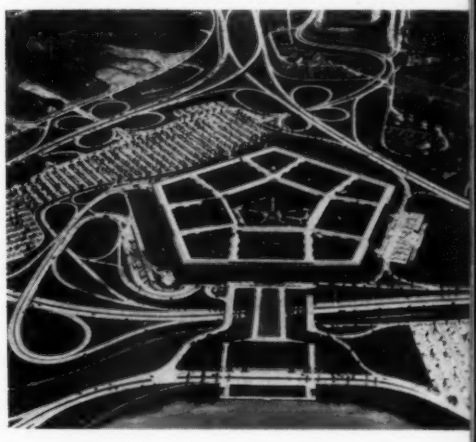


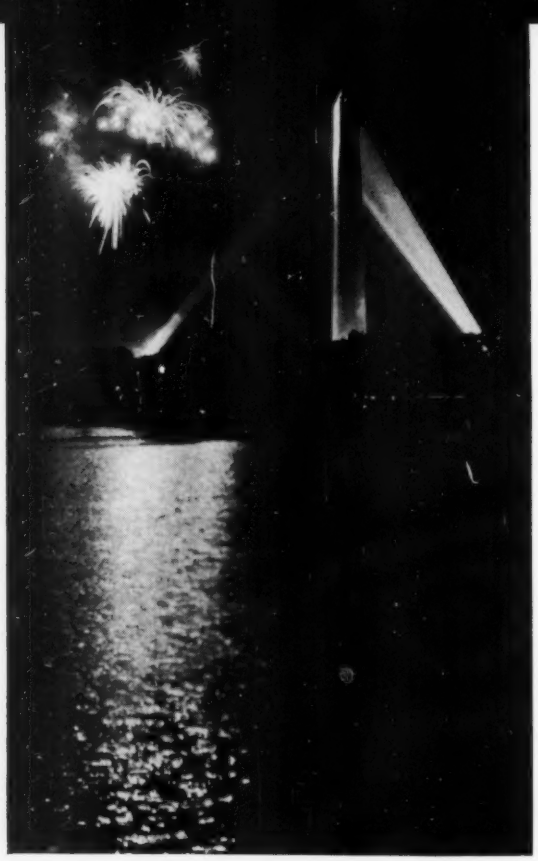
The 90 acres of Roosevelt Island lying offshore from the Lincoln Memorial, are preserved as a memorial to the great conservationist

Dogwood blossoms along Rock Creek, world-famous small tributary of the Potomac. Rock Creek's 2,600-acre park provides a paradise of natural beauty for area visitors



Across the river from Washington, the Pentagon sits solidly amidst its astounding traffic installations. Pentagon Lagoon, in the foreground, empties into the Potomac





Tidal Basin mirrors two annual colorful displays: the fireworks from the Fourth of July celebration, and earlier, blooming of the celebrated Japanese cherry trees which rim the banks of this basin

George Washington enjoyed this view of the Potomac from his portico at Mount Vernon. Of his home Washington once wrote, "No estate in the United States is more pleasantly situated than this. It lies in high, dry, and healthy country . . . on one of the finest rivers in the world"





Fountains play in the reflecting pools before the Lincoln Memorial, which stands on the Potomac's bank. Washington's Ceremonial Watergate, lying between the Potomac and the Memorial, was designed to welcome foreign emissaries, etc. who arrive by water

SEQUOYA

By WILLIAM PRESCOTT OGILVIE

WHO was Sequoya? Who was this man whose name was given to the oldest, loftiest and noblest of all God's living creations, the *Sequoia gigantea,* our own California redwood? Who was this man whose statue now stands in Statuary Hall in our nation's Capitol along with other famed people of our nation? What is his claim to such undying commemoration?

Ranked as the ablest intelligence produced among the American Indians, his claim to fame rests on his development of a Cherokee alphabet of 86 characters—so simple that Cherokee children were able to learn to read and write their language in a matter of days, and so powerful that within a span of a few brief years it was possible for an entire Indian nation to communicate for the first time by written words. It was this alphabet that opened the doors to the white man's knowledge and made of the Indians a civilized people, abandoning the chase and the warpath to "beat their tomahawks into plowshares and their scalping knives into pruning hooks."

The development by this illiterate Indian of a perfect syllabic alphabet, without assistance and in the face of superstition and actual opposition, solely through his own natural talents and the resources of his mind, is one of the outstanding performances of the human intellect.

Born George Guess, about the year 1773, in the state of Tennessee, near Fort London on the Tennessee River, he was the son of a full-blooded Cherokee woman, and, according to various sources considered authentic, of Nathaniel Gist, a friend of George Washington, who spent many years among the Cherokees as a hunter, explorer and soldier. Before the child was born, Nathaniel Gist returned to his own people, leaving the child to be reared a Cherokee.

The elders of the tribe, holding that the name George Gist did not befit this new member of the tribe, debated giving him a truly Cherokee name. At the mother's plea, the boy was named "Sequoya." The name has been translated in two ways. One, "my own," is not commonly held, but the second, "guessed it," is most frequently advanced.

Sequoya grew to young manhood among the Cherokees in the state of Georgia. He took an active part in hunting and fishing as well as sports, became a trader, a blacksmith, an accomplished silversmith whose work is still known, and also a philosopher. During this period he fought the Creek Indians, who sided with the British in the War of

(*Turn to page* 46)

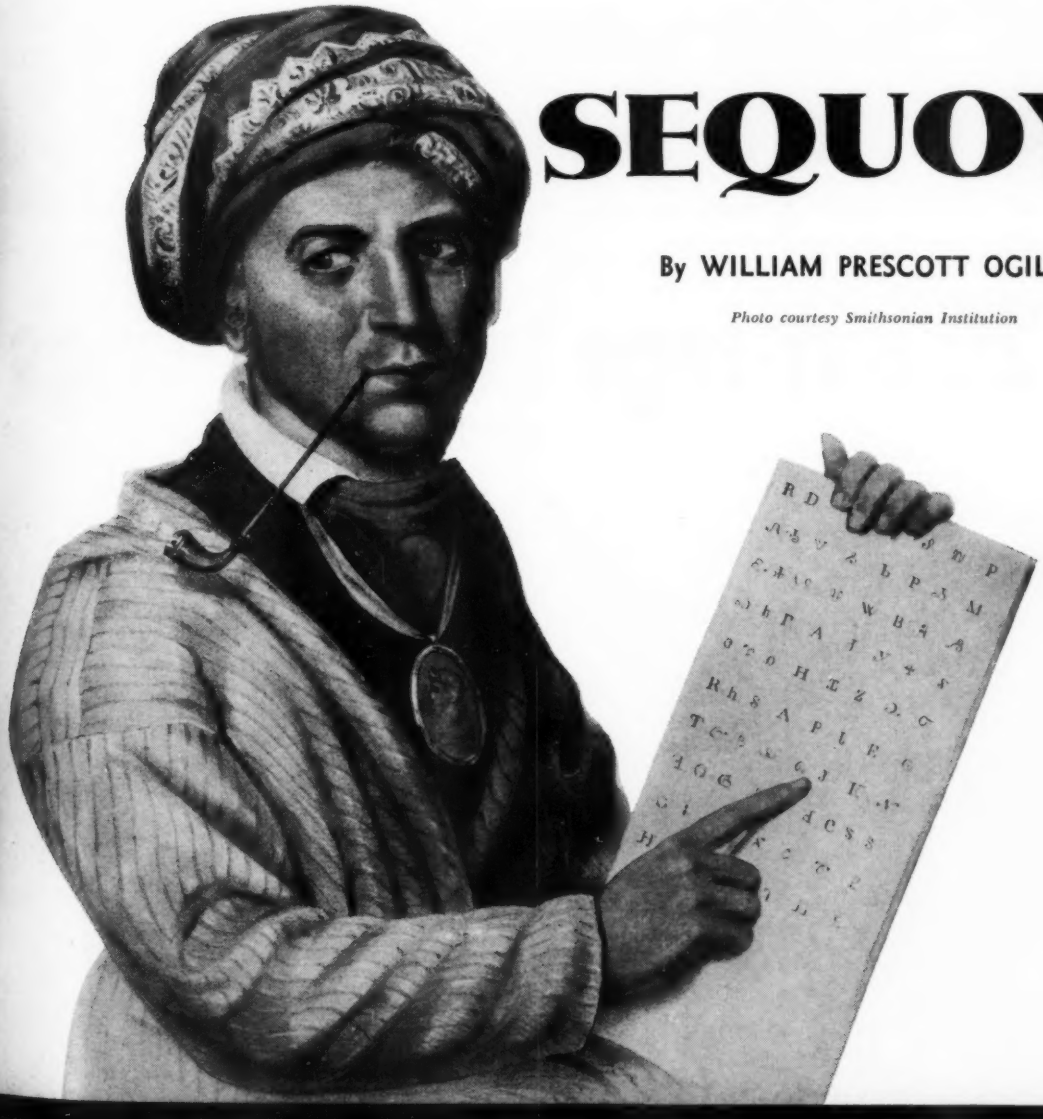


Photo courtesy Smithsonian Institution



"TD-20 out-logs two 75 hp rigs .





Bringing in a turn of logs that measures 7,500 bf, with the new TD-20 owned by L. K. Cearley. He reports the 134 hp TD-20 is out-logging two former crawlers with total of 150 net hp!

Logging Contractor L. K. Cearley, Glenora, Washington, regularly skids 70 mbf of logs to the landing daily—with his new International TD-20. This beats the daily production of the two 75-hp crawlers he formerly used!

"The TD-20 is doing more work than two 75-hp outfits, and we are using three less men than before," states Mr. Cearley. "Not only are we getting bigger turns, but loads are coming in to the landing faster.

"Quick-shift reverse (Shuttle-Bar control) makes a big difference. The TD-20 can doze a skid road to the fallen trees faster and get into position quicker than our other equipment."

Both the new International TD-15 and TD-20 are taking over jobs right and left from less modern rigs—even from next-size-bigger crawlers, in many conditions. Both the new "15" and "20" have 6-speed, full-reverse transmissions, with "single stick" shift. Both give you full and instant advantage of six speed ranges, forward or reverse, with "Shuttle-Bar" control. And both have the extra work wallop of increased high-torque diesel horsepower!

. . . saves three men"

Get on the man-size, foam-cushioned seat of a new "15" or "20." Prove to yourself what it means to beat the profit-squeeze from three directions at once: getting extra work-capacity for your money; getting amazing increases both in manpower and horsepower efficiency. See your International Construction Equipment Distributor for a demonstration.

TD-20 work capacity lets Mr. Cearley "consolidate" his equipment investment in one crawler—reduce his work crew by three, and still handle his daily production. Result: operating savings that help beat today's "squeeze" on profits!

A COMPLETE POWER PACKAGE: Crawler and Wheel Tractors . . . Self-Propelled Scrapers and Bottom-Dump Wagons . . . Crawler and Rubber-Tired Loaders . . . Off-Highway Haulers . . . Diesel and Carbureted Engines . . . Motor Trucks . . . Farm Tractors and Equipment.

International Harvester Co.,
180 North Michigan Ave., Chicago 1, Ill.

International® *Construction Equipment*



Dunes are reflected in placid Pilgrim Lake, located in northern part of Truro. This area is included in National Park Service plan

CAPE COD: *"National Seash*

By BETTY KINDLEBERGER

"THAR she blows," declared a Cape Codder last month when a "storm" of Sou'wester proportions struck the famed peninsula. He wasn't referring to an Act of God, but to the excitement created by the National Park Service's Cape Cod National Seashore proposal. Cape Codders obviously aren't "waiting out" this storm. In fine Yankee tradition these seashore residents are expressing their opinions on both sides of the issue in unmitigated terms.

A leading and vociferous advocate of the national seashore proposal is *The Cape Codder,* a weekly newspaper of Orleans, Massachusetts, edited and published by Malcolm and Peggy Hobbs, which has termed the issue "national seashore or national eyesore." This courageous weekly, the first newspaper to break the story in 1956 that the Park Service was considering such a plan, has steadfastly endorsed the seashore concept despite mounting opposition and a threatened advertisers' boycott. Meanwhile, help was on the way, as at least one national organization—The American Forestry Association—pledged its support for the creation of the national seashore.

Stating its position editorially *The Cape Codder* declared:"... Now that the specific proposal for the taking of land (30,000 acres) has finally been made public, and despite the fact that it is more extensive than originally thought, we can see no reason to change that position. We think that it would save Cape Cod; and we can see no other practical way that it can be saved. We are in favor of the National Park proposal—but with two important qualifications. The first qualification is that people who reside within the area to be taken be given life or 25-year tenancy of their property so far as practical. And secondly,

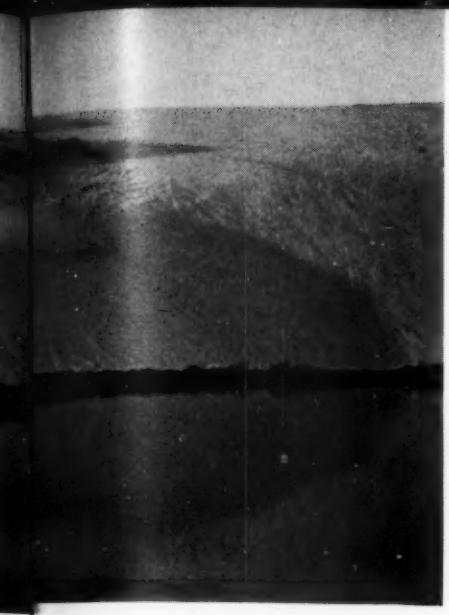
(*Turn to page* 42)

Uncluttered shoreline of Great Beach would be preserved in park status. Boundaries would protect Cape from future intrusions and exclude villages, commercial areas



Nauset Beach at Eastham is noted for swimming, beach activities, picnicking

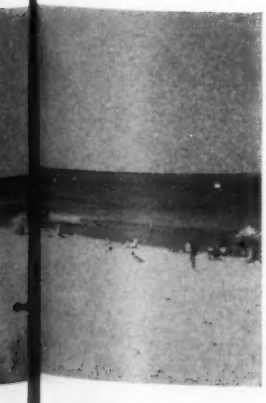


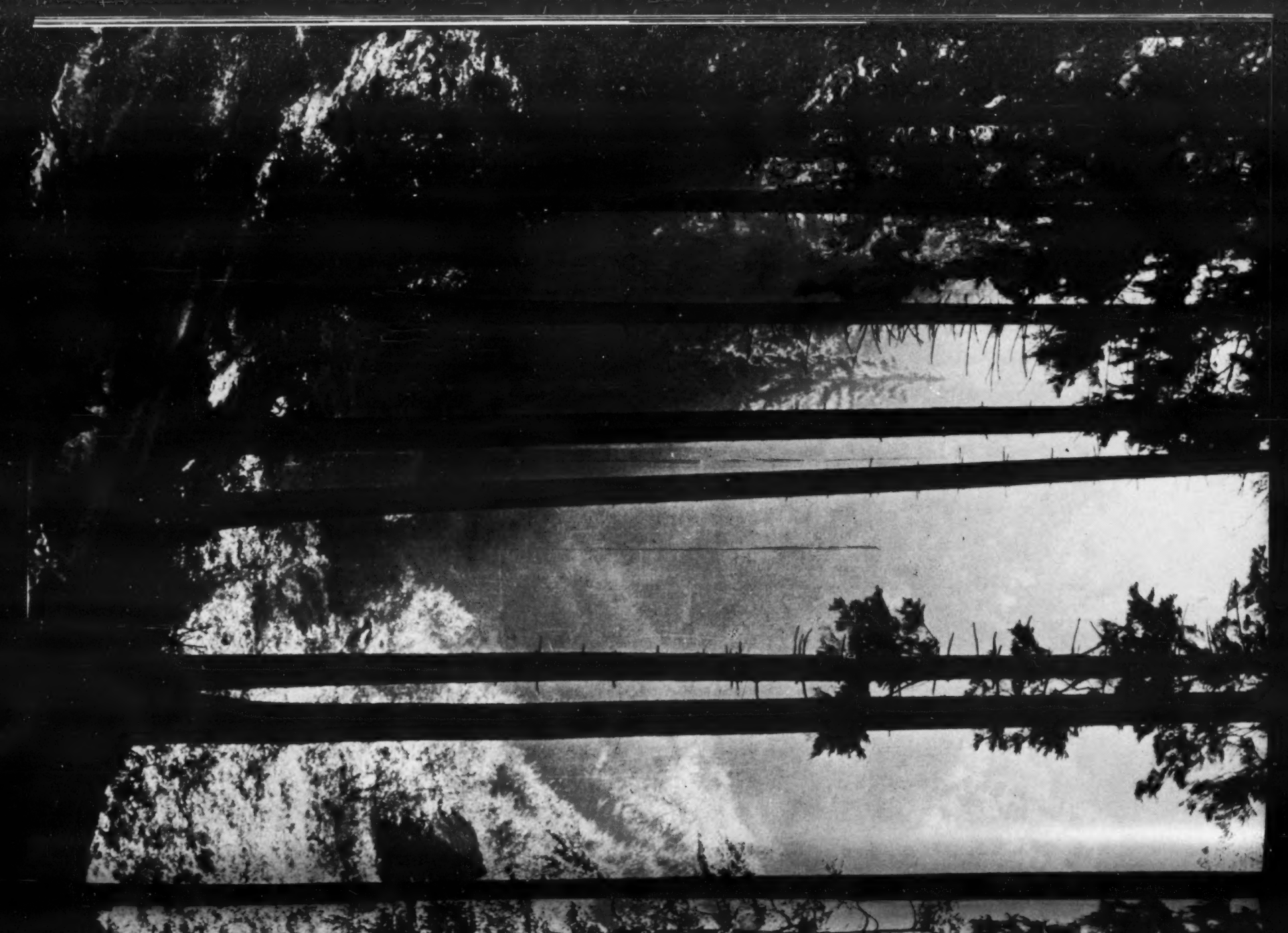




Winds, waves, and currents have molded banks heaped up by glaciers

...shore or National Eyesore?"





"American Forests" is not happy with the small woodlands situation in this country. To shed more light on the subject, we intend to explore the problem in a number of foreign countries. This article is the first

SMALL FARM FORESTS IN NORTHERN Germany

PART I

By WOLFGANG KOEHLER



Wolfgang Koehler is forestry attaché at the German Embassy

IN Germany as in the United States the poor condition of most small woodlands is a forestry problem of paramount importance. From the standpoint of conservation as well as timber production, it is essential that these small forest lands be properly managed. Both of our countries are earnestly seeking solutions to this situation, but our various patterns of land ownership present different problems. However, we believe the results of our approach to the small ownership problem may be of some benefit to the United States.

There are approximately 17.5 million acres of forest land in the Federal Republic of Germany, of which 5.5 million acres are state forests. The rest, or 70 per cent, belongs to communities or public corporations or is held privately. These private forest holdings may be classified as: 1) ownership cooperatives with unidentifiable property shares, which are operated according to laws and traditions, some of which are very old; and 2) unrestricted ownership, where no control whatsoever can be exerted by any state authority.

It is this latter group with which we are primarily concerned. Their holdings total 7.5 million acres, or two-fifths of the entire commercial forest area. However, it should be mentioned that not all of these private holdings are in an unsatisfactory condition. The majority of the larger holdings are in good condition. These forests, with practically no exception, have been owned and properly managed by the same families for many centuries. Many owners of farm forests in northern and southern Germany practice sound forestry principles. However, the really difficult part of our task is still ahead of us—to thoroughly improve the condition of our private forests.

Small woodland holding located near the famous Black Forest

There are 700,000 management units with forest land in Germany, according to the latest statistical figures available. Of these, 675,000 are farms combining agricultural and forest operations, but on most of them, 600,000, agricultural production predominates. Not more than 23,000 owners consider their forests important enough to make any effort to keep them in good shape. This is especially true for some of the larger forest holdings, whose average size is 70 acres.

By far the largest category numerically — 440,000 farms, averaging only 7.5 acres of forest land — does not meet the standards of satisfactory forest management. Another category consists of 135,000 farms with less than two acres of forest land per farm. These owners do not care for their forests at all, and the forest land is entirely neglected and devastated. These two groups represent 4.3 million acres, or about 20 per cent of the German forest area, with 575,000 different owners. In other words, about 80 out of 100 owners of forest land in Germany up to the present day have not taken the necessary care of their forests.

You may say that as long as 80 per cent of the total forest area is in satisfactory shape there is no reason to feel alarmed. But this conclusion would not be realistic. If you consider the economic situation in Germany, and if you try to investigate the part forestry plays in stabilizing the agricultural structure of the country, you will soon realize the importance of improving the present condition of the 20 per cent of private forests mentioned above.

Since the end of World War II there has been an ever-growing un-

derstanding of this problem, which has led to a rather encouraging development—the organization of voluntary forest management units. However, before I discuss our experience of the past 14 years, I would like to describe briefly the forest situation in Germany. This will also explain why there is such a need from the standpoint of production to deal with the problem of small forest properties without further delay.

The total annual cut of timber in Germany amounts to about 780 million cubic feet. This figure does not include wood consumption on small farms, because there is no way to get the exact figures on that. The total annual consumption of timber for all industrial uses, however, is about 1.1 billion cubic feet. This means that Germany and her economy depend on imports for about one-third of the annual timber consumption. (Incidentally, the same figures apply for the pre-war period as well.) Lumber, timber, semi-finished and ready-made products of the pulp and paper industry are imported from other countries, especially from Sweden, Finland, Austria, Poland, and Russia, but also from North Africa and, to varying degrees, according to the particular freight situation, from the United States and Canada.

Investigating the figures of German timber production more closely, you will find significant differences in yield between the ownership types. The annual growth per acre per year on state forest land amounts to 65 cubic feet, while the yield on private forests does not exceed 26 cubic feet, and is in many cases considerably lower. Only the production of a few top private forests with a larger area is comparable to the yield in the state forests. Therefore, our aim has to be an increase in production on private forest land for industrial use of 100 million cubic feet per year.

To meet this goal we would have to double the present timber production on about 4 million acres of private land. This should not be too difficult to achieve. By doing so, however, the total annual production of commercial timber would be close to 900 million cubic feet, more than 75 per cent of present consumption. The production of mass material, such as pit-props and pulpwood, would benefit most by this development.

The German foresters, however, are also striving for well-managed farm forests because of their important contribution to conservation of soil and water; which, in reverse, will have its influence on agricultural production as well. Forest influences on water balance and water storage are a generally known fact in this country, while in Germany their importance is not yet fully acknowledged. Finally, farm forests have to fulfill an essential function within a sound farm management policy.

Professor Hasel (Freiburg) gave a fivefold definition:

1) *The size-function*: For orderly forest management a minimum size is essential;
2) *The timber resources-function*: The farmer should consider his forest as a permanent source of cheap raw material, ready for use;
3) *The income-function*: The forest can provide an additional source of cash, especially in a year when agricultural income should fail to cover expenses;
4) *The savings account-function*: In a case of financial emergency of any kind, standing timber is a reserve which is easy to liquidate;
5) *The labor-function*: The farm forest provides additional work for farm employees during the winter.

As you probably noticed in the introductory statistical figures, the most significant feature of the German situation regarding small private forests is an extremely dispersed ownership pattern. This is the result of a common practice of land division in each case of succession. This practice has created a chain reaction, since each piece of property is divided for inheritance purposes. Today you will find in some areas a most confusing picture in looking at a property map.

Bearing in mind that efficient forest management cannot be carried out in small and scattered pieces of land, this heritage system really has had a most devastating effect. Just take the situation in the township of Breitau/Hesse: 89 farmers own 450 acres of forest land, split up into 389 pieces, each farmer owning about 5 acres, subdivided into at least 4 pieces. In South Germany the situation is even worse. You can find the same patchy pattern of farm land in many parts of Germany, which makes economical farm management almost impossible.

Land consolidation offices have been established to develop detailed plans towards a solution of this problem. In quite a few townships this work is already well under way. This, of course, is a costly and time-consuming business. It takes sometimes years to work out a sensible redistribution of land to which everybody concerned will agree. This is even more difficult when forest land is involved. Everyone familiar with this problem will readily agree to the urgent necessity of land consolidation, but will also be aware of the many difficulties. While waiting for a final solution, other means of improving the situation have had to be developed.

One possible solution could be to

(*Turn to page* 50)

VERMONT TRAIL RIDE?

In response to mounting requests for more eastern Trail Rides, AFA herewith poses a question: How many AFA members would like to participate in a five-day (long New York weekend) ride in Vermont woodlands this September? If 10 or more reply affirmatively, AFA will try to set it up in cooperation with the Green Mountain Horse Association.

Various details such as horse rental, lodging, and itinerary remain to be worked out. Riders will return to the same base (an inn) each night and forego the usual trail ride pleasure of making camp each night. This concession to modern living is necessary because there isn't a pack horse in all of New England. But the ride would still present plenty of mountain scenery and the riot of fall colors for which Vermont is world-famous.

Meanwhile, news of Trail Riders indicates they are living up to the venturesome spirit common to the breed. Charles Borklund, of Perry, Florida, this summer will be riding camels in Egypt and elephants in India. Dr. Newt Elfenbaum, Chicago, Illinois, has scheduded a jet tour of Russia, then a dedication address for the Dental Department of the new Hebrew University in Jerusalem.

Forester's Notebook

By KENNETH B. POMEROY

RECOGNIZING the urgent need for better understanding of watershed management in the West, the Charles Lathrop Pack Foundation last year underwrote education in that field with three-year grants to the Universities of Arizona, New Mexico and Colorado State.

Colorado State University promptly engaged Dr. Robert E. Dils, formerly of the University of Michigan. Ten undergraduate and four graduate students now are learning the mysteries of forest influences and forest hydrology.

Good programs attract good students, and the latter usually need financial assistance. That is Dr. Dils' immediate problem. Graduate research assistantships at Colorado carry a stipend of $2,200 for 12 months, and in addition out-of-state tuition fees are waived for the recipients. Dr. Dils needs another "angel" to help two more outstanding young men prepare to cope with the challenging water problems of the nation.

Grizzlies

Every so often someone wishes to know how many grizzly bears there are in the United States. No one knows with certainty. The Forest Service estimates there are 6,700 grizzly or Alaska brown bears with-

Venerable Oak of Memphis

TREES always seem to be getting in the way of progress. The latest report concerns a Swamp Red Oak, *Quercus falcata pagodaefolia*, Elliott, one of the champions recognized officially for its giant size by The American Forestry Association.

This venerable oak, measuring 19 feet, 11 inches in circumference, 90 feet tall and 83 feet across the crown, stands before the home of Miss Undine Levy, 3084 Mountain Terrace, Memphis 7, Tennessee. (See photo at right.) An imminent widening of the street threatens the tree.

The *Memphis Commercial Appeal* took note of the situation on March 8, 1959 with the following poem:

"The vast green kindness of the oak
Breaks warring winds that whip the fields,
And shelters all the lesser folk,
God's creatures that its mercy shields.

The angry furnace of the skies,
Baked by midsummer's tyrant sun,
Yields to its branches' gentle sighs
That mark the course cool breezes run.

Five centuries have watched it grow.
The breezes brush old branches where
A blessing falls on all below
To temper topless wells of air.

All creatures love the thrusting tree
That stood before our land began.
All things would see it blowing free,
Undying still . . . Excepting man?"

by Dean M. Stewart



Miss Undine Levy stands beside her famous Swamp Red Oak which is threatened by bulldozers



Best stamp design



Worst stamp design

Forest Stamp Best in 1958

The multicolor Forest Conservation stamp has been voted the best stamp design of 1958.

A record 21,535 ballots were cast this year in the poll conducted annually by Editor Carl P. Rueth, of Linn's Weekly Stamp News.

Rudolph Wendelin, Department of Agriculture staff artist, prepared the design for the green, brown, and yellow stamp released last October 27 at the 83rd Annual Meeting of The American Forestry Association at Tucson, Arizona.

Trailing behind the Forest Conservation stamp's 5,727 votes were the Mackinac Bridge commemorative with 3,860 and the Overland Mail with 2,744. Four others, the Minnesota, Fort Duquesne, International Geophysical Year and Atlantic Cable, received more than 1,000 votes.

Worst design of the year by a wide margin in the balloting was the Gardening stamp, which was also voted the least necessary. Thirty-five per cent of the voters called it the worst design, compared with 18 per cent for the Journalism stamp and 16 per cent for the IGY issue.

Post Office officials, who upped the print order to 160 million once they had seen Mr. Wendelin's design, predicted that it would be one of the most popular stamps ever published. A renewed effort to place copies in all post offices was being pushed last month as the result of complaints by AFA members that they couldn't buy the stamp in some localities.

The stamp was universally praised for both its conservation message and its beauty by many leading Americans including President Eisenhower. This sentiment was echoed by more than a thousand members of The American Forestry Association who called the stamp one of the most appealing conservation messages ever produced, in postcards and letters to the association. AFA President Don P. Johnston called the production and distribution of the stamp an "outstanding conservation achievement."

Only critical note struck, according to western members, was a comment in the February issue of the *Sierra Club Bulletin*. In an article criticizing, among other things, forestry education programs, the article states, "The recent forest conservation stamp carefully places a stump in the foreground (wildlife in the background)."

Meanwhile, the Pittsburgh Collectors Club voted the stamp the "most attractive" of the year.

in the national forests in the states of Alaska, Colorado, Idaho, Montana, Washington, and Wyoming. Other estimates, covering all national forests, show 106,000 black bears, 3,200,000 deer, 277,000 elk, 27,000 mountain goats, 12,000 bighorn sheep, 24,000 antelope and 13,000 moose. Arizona and New Mexico contain 16,000 peccaries, while 1,700 wild boars roam the national forests of California, North Carolina and Tennessee.

Dick Stroud of Sport Fishing Institute sharpened his pencil and came up with the following comment on big game statistics:

"If the average weight on the hoof is about 150 pounds, all these big game animals total some 552 million pounds. That's a standing crop of about 30.5 pounds per acre. At a 15 per cent harvest rate, the yield turns out to be something under 5 pounds per acre—a substantial by-product in terms of usable protein.

"Far more important, of course, are the recreational hunting days supplied. U. S. big game hunters spent 30,834,000 man-days in pursuit of their quarry in 1955. In the process they spent $323,909,000, for an average expenditure of about $10.50 per hunter-day. Therefore, big game hunting on the national forests (7,680,000 hunter-days in 1958) generated almost $81 million of business—nearly 45 cents per acre!"

Tree Planting Record

Foresters expect to get the nation's staggering tree planting job done in this generation if they can keep up last year's record. Between July 1, 1957 and June 30, 1958 a total of 1,534,264 acres were planted in forests and 34,444 acres more in wind barriers. Private land owners accomplished 86 per cent of the task, much of it with assistance from the Soil Bank's Conservation Reserve.

Mining Clean-up

In 1955, The American Forestry Association and other groups sponsored amendments to the mining laws that plugged loop-holes through which much timber was being taken from the national forests. Correcting the situation requires field examination of nearly 74 million acres on which there are 808,481 claims.

By December 31, 1958 the Forest Service had completed field examinations on 42,697,777 acres with 470,132 claims, but much of the area needs further attention.

Of the 7,971,014 acres on which determination of surface rights has

INDIAN

FIRE PUMPS COMPLETE YOUR TRUCK EQUIPMENT!

Trucks without INDIANS — like hot dogs without mustard — are incomplete! Now is the time to add INDIAN FIRE PUMPS to your apparatus. Rugged, portable INDIAN FIRE PUMPS are the biggest dollar value you can buy in fire protection equipment.

They will handle as much as 40% of your calls — many 20 years old are still in use — replacement parts are available instantly — and they use only CLEAR WATER!

Remember — there is only one INDIAN FIRE PUMP! Insist on INDIANS — they have no equal.

No. 90 INDIAN
(Sliding Pump Type)

Form fitting, ventilated tank permits constant circulation of air between tank and carrier's back. No dampness. Leaves arms free for climbing ladders, etc. Highly popular for many years.

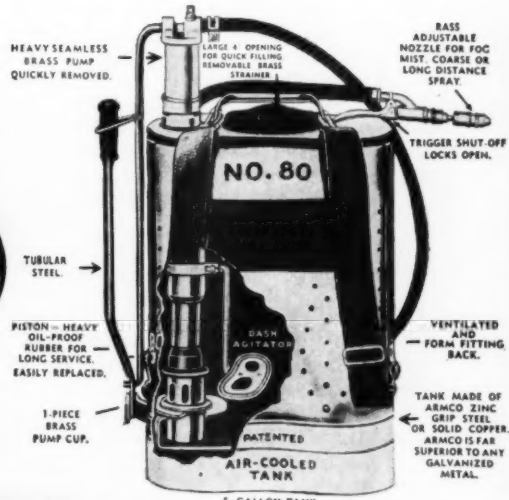


Both Types Approved by Underwriters' Laboratories.

Fire fighting authorities who have experimented with a "WET WATER" powder mixed with the water in an **INDIAN FIRE PUMP** tank report it does an excellent job.

No. 80 INDIAN
(Lever Type Pump and Handle)

Heavy steel pump lever. Ventilated tank. 5 gal. capacity. Continuous high pressure. Armco zinc-grip steel or glistening solid brass tank. Strongest construction throughout. Has no equal.



5-GALLON TANK

TYPICAL TESTIMONIALS IN OUR FILES

- *"I can honestly say that **INDIANS** are worth their weight in gold".*
- *"We consider **INDIAN FIRE PUMPS** to be the most important equipment in our department".*
- *"We use nothing but **INDIANS** for a portable extinguisher. They're the best".*

SEND FOR NEW CATALOG!

D. B. SMITH & CO. "For Good 70 Years We Vouch" 405 MAIN ST., UTICA 2, N. Y.

Distributors
Pacific Equipment & Rubber Co., Ltd., San Francisco 7, Cal.
Heinrich Supply Co., Los Angeles 15, Cal.
Fred E. Bennett Co., Portland, Ore.
Fred E. Bennett Co., Redwood Falls, Ohio.
C. E. Curtis & Sons, Salt Lake City, Utah.
Canadian Agents
C. S. Mackay & Sons, Hamilton

been completed, only 70 of the 64,325 claims proved to be valid.

Inquiries indicate the Bureau of Land Management is progressing in about the same manner in its surveys of mining claims. These surveys also help BLM strengthen its other land management activities.

Wood Specimens

Some people collect wood samples as others gather coins or stamps. Washburn University, Topeka, Kansas has about 3,000 pieces of wood, all catalogued and labeled as to locality and species. Do you know of a similar collection? If so, write to Donald W. Janes of the Washburn University staff.

When asked to evaluate the Washburn Collection, the Forest Products Laboratory replied:

"In our opinion a wood specimen has value only if it is backed by a herbarium voucher which is deposited in some well-known herbarium. Such specimens can be obtained for about 50 cents, which would include the herbarium material."

People who just like to whittle can get a Wood Study Kit containing 54 wood samples, a knife, 10x hand lens and an 84-page manual from Timber Engineering Company, 1319 18th St., N.W., Washington 6, D. C. Price $10.00 prepaid in U. S.

Cape Cod: "National Seashore or National Eyesore?"

(*From page* 35)

some formula must be adopted for federal refunds to the towns for loss of income from tax property.

". . . Let's face it! We—the people who own and live on Cape Cod—are losing a little more of it each year, each month, each week. Are there any who cannot see the creeping desecration, the impinging blight that chews like disease into area after area? This can go on for just so long. Then one day there will be no remoteness, no beauty left. . ."

The strong reaction to the seashore proposal, both pro and con, has been reported by this newspaper. Key people of the area were quoted: Selectman Charles E. Frazier, Jr., of Wellfleet, "If (the federal government) now takes what is shown on the map in the *Cape Codder,* the town of Wellfleet would virtually cease to exist. . . If 2/3 (of our land) were taken, with no reimbursement for loss of taxes to the town, our tax rate would have to triple."

Selectman Maurice Wiley, of Eastham, "I do feel that some of the natural beauty of part of Cape Cod should be saved for future generations. . . We can't just think all the time of the money we can make today. We must also think of those who will come after us."

Joshua Nickerson, of Orleans, "I think I know how the Indians felt when the Great White Father pushed them to the wall."

Selectman John Worthington of Truro, "I feel confident that if the federal government moves promptly to buy this land, we will, in 10 or 15 years' time, be most grateful that it was done. It would have tremendous importance for this area."

The Barnstable County Beach Commission, "A national park would ruin the economy of the area rather than improve it."

Walcott Ames, president of the Barnstable County National Bank, "The type of people who come to national or state parks are not the type we want. We want the solid kind like those at Oyster Bay."

Governor Furcolo of Massachusetts, the Massachusetts House of Representatives, and Francis W. Sargent, former Massachusetts Commissioner of Natural Resources and now director of the National Outdoor Recreation Resources Review Commission, have enthusiastically endorsed the seashore proposal.

Widespread interest generated by the proposal became even more evident at the public hearings held at Eastham and Chatham. There, Conrad Wirth, director of the National Park Service, met opponents face to face. Reporters and TV men were there to record the events, as were a reporter and cameraman from *Life.*

Wirth opened the hearings with a description of the proposal's background. This national seashore plan, he told them, resulted from a 1954-55 survey of park and recreation possibilities along the Atlantic and Gulf coastlines. The survey found Great Beach to be among the finest seashores on our entire Atlantic Coast. The beach was the most obvious feature of the area, but further studies revealed that heaths, marshes, forests, and lakes are also basic elements of the Cape's distinctive character. Therefore, Wirth told the group, the proposal for the national seashore consists of about 30,000 acres—a ribbon-like territory extending some 40 miles along the outer coast from Provincetown to the tip of Nauset Beach and nearby Morris Island and Harding Beach in Chatham.

Concluding his introductory remarks at the Eastham meeting, Wirth invited questions and comments from the 550 people present. Their terse questions and criticisms created an explosive session.

Some people accused him of making secret deals with selectmen, while others decried a policy which would take homes and break up family life. A North Truro fisherman couldn't understand why so much inland acreage would be needed for a seashore. To these statements Wirth replied, "I am trying to tell you people the truth, and I will not say that some of you won't be hurt, because in an undertaking of this size it is inevitable that some will. But we honestly want to work with you and for you and to cause as little as possible disruption to your lives and your income. If the Congress approves this seashore, that is the basis on which we will proceed and no other."

Edmond Milliken, co-chairman of the Eastham Citizens Committee, then commented on Wirth's illustrations of how national parks have had a beneficial economic effect on communities. "There was a definite economic increase in the Great Smokies and Cape Hatteras areas. But we are not backwoodsmen or a handful of fishermen and farmers. . . This is a different area. We are now doing a $100 million business every year. Our economy is now geared to community growth and homes, and not to a tourist, weekend economy such as the park will create."

This stormy session at Eastham lasted four hours, and there was little evidence that many had changed their attitudes as a result of the discussion.

The 700 residents who attended the Chatham meeting the following evening were more restrained in questioning Wirth. Here the effect on the economic structure was a primary point of contention. Wirth told them, "That is a question which we have been earnestly struggling with for the past 48 hours with you people and your officials. It is our sincere belief that business outside the area will increase tremendously, and I urge you all to plan and zone in an-



WHITE-WING CROSSBILLS on a Douglas fir tree farm in the Pacific Northwest. Here, selected areas are clear-cut to provide the open, sunlit ground on which fir seedlings thrive. Nearby stands of trees are left as a planned source of seed to reforest the harvested land and assure a timber supply for future generations.

growing timber as a crop on land dedicated to America's future...

Quality homes of wood are still America's best building buy. Many of the finest are built of beautiful west coast lumber sold under Weyerhaeuser's 4-Square trademark.



High in the snow-whitened Cascade Mountains, a Weyerhaeuser forester inspects a company tree farm. From the blocks of seed trees on the cold, gray horizon to the fir seedlings at his feet, he sees everywhere results of careful forest management... the promise of a perpetual wood supply.

All Weyerhaeuser tree farms are managed with the future in mind, while serving the needs of today. They are operated under long-range forestry plans designed to maintain a balance between the volume of wood harvested and the amount being grown. The plans are implemented by reforestation of cutover areas and by diligent protection of timber stands against natural forest enemies... such as fire, insects and disease.

Company timberlands provide many benefits other than a continuous flow of wood for lumber, plywood, pulp and other forest products. The water retained by the spongy, tree-shaded forest soil feeds lakes, streams and reservoirs the year around. Game birds and animals thrive on tree farms and there are many scenic areas available for camping, fishing and other forms of recreation. *Write us at Box A, Tacoma, Wash., for a colorful new free booklet,* ***Forest Products from Tree Farm to You.***

Weyerhaeuser Timber Company

making forestlands serve America better by scientific management

A BETTER PUMP BY
FEDCO



Built to U. S. Forest Service Specifications

SMOKECHASER OUTFIT
MODEL N

1 Comfortable, easy pack, it "fits" Shoulder straps will not rope or twist
2 Maximum water capacity—5 gallons Minimum weight — dry 4½ lbs. Service weight 46 lbs.
3 Strong, corrosive resistant bag Neoprene rubber coated nylon fabric
4 40" hose and ball bearing hose connectors interchangeable with FS model
5 Standard Fedco pump with positive shut-off interchangeable with FS model

A FEDCO EXCLUSIVE
Fedco Smokechaser outfits can be filled from a small remote water seepage using the standard Fedco pump at the rate of one gal. per min.



Details of the Smokechaser on request
DEALER INQUIRIES INVITED

FIRE EQUIPMENT DEVELOPMENT CO.
829 Estabrook St. San Leandro, California
Distributed in Canada by
CANUS EQUIPMENT LTD. OTTAWA, ONTARIO

ticipation of it. As for existing businesses inside the boundaries, there will be as little disruption as possible although, to be honest about it, we would hope in the long-range program to gradually purchase these so that eventually there will be none in the seashore itself."

The Cape Cod National Seashore proposal still lacks the approval of the Department of the Interior, but bills have been introduced in Congress authorizing its creation. Wirth urged every interested person to write his opinions of the national seashore proposal to his representative, Congressman Keith, and to the House Committee on Interior and Insular Affairs. *The Cape Codder* in a page one box asked its readers to do the same.

National Forests Look Ahead

(*From page* 19)

roadside fuel on 37,000 acres; clearing and maintaining 12,000 miles of firebreaks; and prescribed burning on 3.5 million acres.

Rodents. Control the most serious infestations of harmful rodents such as porcupines and mice on high-value areas—1.8 million acres of rangelands and 9.4 million acres of timberlands.

8) *An Expanded Road System* will be required, under the program, to aid protection, open up more timber for management, provide greater access for people visiting the forest for recreation, and aid in multiple use administration. Major projects for the short term period:

Complete the building or rebuilding of about 90,000 miles of forest development roads and 8,000 miles of trails.

Maintain to full standards 149,700 miles of existing roads and 112,200 miles of trails and 58,600 miles of new construction.

9) *Boundary Adjustments and Ownership Consolidation,* where public and private lands are intermixed, will be necessary for effective management. Major projects:

Exchange, on a land-for-land basis, approximately 1.4 million acres of isolated and intermingled national-forest areas for other lands.

Survey, post, and establish corner markers on 100,000 miles of national-forest property lines now inadequately located and marked.

Improve and maintain a more adequate land status record system.

Complete the determination of surface rights of mining claimants under the Multiple Use Mining Act of July 23, 1955.

10) *Essential Structures and Equipment* must be provided to keep pace with the proposed resource development program. As new areas are opened up for timber harvest and other uses, operating bases, including headquarters and housing for personnel, new fire lookout stations, equipment warehouses and other service buildings will be required. Major projects:

Construct 2,730 dwellings and related improvements, 2,710 service buildings, and 530 lookout structures.

Build up forest communication system by adding 2,000 new radios, replacing 9,000 old radios, and constructing 3,000 miles of telephone lines.

Build 25 new landing fields and rebuild 37 existing fields to keep pace with increasing use of aircraft in protection and management.

Program Benefits

Under the proposed program, the management, protection, and use of national forest resources will keep pace with the nation's expanding population and economy. There would be substantial direct financial returns to the nation, as well as great secondary and intangible benefits.

Cash receipts could double in 10 to 15 years, rising to $210 million annually. Payments for county schools and roads would likewise increase. Capital values of national-forest lands, timber, and forage would go up about a billion dollars.

As an important secondary benefit, more jobs would become available, increasing to an estimated 620,000 people (60 per cent more than today) at work harvesting, processing, and marketing national-forest timber and its products. Local trade channels could be enriched by nearly one billion dollars expended annually for sporting equipment, transportation, licenses, lodging, and other items.

No dollar value can be placed on the tremendous soil and water bene-

fits which would accrue. Nor can any measure be made of the value of personal pleasure, relaxation, and spiritual satisfaction additional millions of people could derive from national forests.

Development work in the next 10 to 15 years would also show significant long-range results. By the year 2000, national-forest timber sales could climb to 21.1 billion board feet, worth $350 million annually at current prices. Outdoor recreation developments by that time would accommodate a probable 600 million annual visits. There would be more and better water for domestic and industrial use; better range; more wildlife, fishing, and hunting to meet the requirements of an estimated 332 million people in the nation as the next century dawns.

Substantial progress already has been made toward these goals. The foundation for much greater progress is in place. This program builds on that foundation.

Reading About Resources

(*From page* 64)

himself could rattle off Dow-Jones averages.

Even when the range of trees is as limited as it is in the United States – in comparison to Africa for instance – identification remains a difficult and tricky business for anyone who has not made forestry a profession.

The many handbooks help. To have one stuck in a pocket is essential for any hike – this is axiomatic, unless the country is so familiar that the trees are all old friends. But now a new book comes along which makes most of these handbooks as out-of-date as the Model T. It is **The Tree Identification Book** by George W. D. Symonds, illustrated with photographs by Stephen V. Chelminski (M. Barrows & Co., N. Y. 1958. $10.00).

Here are over 1500 photographs, arranged with appropriate captions in a system too ingenious to describe here, but one that will facilitate the identification of almost anything. This is a major breakthrough in its field. It will very likely affect all identification books yet to come. The most obvious drawback is simply that this is a library-sized book, too big for pocket or duffle. The next step will certainly be to "edit down" the format to a book that can leave the library and hit the open road.

There is another new book, even



Now...a growing forest!

Now the once "lonesome pine" has lots of company—thanks to Weedone Brush Killers! Weedone kills undesirable brush and weeds, allows new seedlings to become firmly established without interference. Result—growth quickly begins for effective reforestation and pine release.

use WEEDONE 2,4,5-T special air spray formula

This formula is recommended for aerial application in Forest Management, pine release and reforestation. For Timber Stand Improvement and Weed Tree Control, specify new DINOXOL or TRINOXOL where technique is stump spraying, basal spraying, frill treatment, tree injection or airplane application in oil only.

For heavier woodland yields, write for complete information on Weedone Brush Killers for forestry applications.

AMCHEM

WEEDONE Brush Killers

another chemical development of **Amchem Products, Inc.**
(Formerly American Chemical Paint Co.)
St. Joseph, Mo. • AMBLER, PA. • Niles, Calif.

Originators of 2,4-D, 2,4,5-T and Amino Triazole Weed Killers.
Amchem, Weedone, Dinoxol and Trinoxol are registered trademarks of Amchem Products, Inc.

L&S INSTRUMENTS

LEUPOLD FORESTRY INSTRUMENTS

LEUPOLD
CRUISER COMPASS

Professional Sighting Compass

Sturdy . . . weather-proof instrument for timber cruising or preliminary surveys. Dimensions, weight, size of dial and length of needle ideally proportioned for easy sighting. Leupold exclusive declination set-off mechanism. Recommended by leading forestry schools.

Outside diam., 3½"
Needle length, 2½"

$13.95



LEUPOLD ABNEY LEVEL

Fast, accurate slope measurement and leveling.



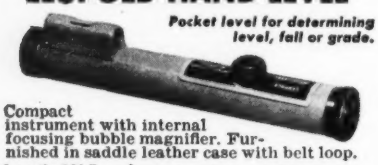
The only Abney Level supplied complete with all four commonly used scales — ready for instant use. No "extra" scales to misplace. No removing and reversing of arc frame to bring desired scale into position. Internal focusing bubble magnifier.

Complete with 4 scales—
Per Cent • Degrees
Topographic
Chainage Corrections
$33.00

Length . . . . . 6½"
Weight . . . . . 10 oz.
Furnished in saddle leather case, belt loop.

LEUPOLD HAND LEVEL

Pocket level for determining level, fall or grade.



Compact instrument with internal focusing bubble magnifier. Furnished in saddle leather case with belt loop.

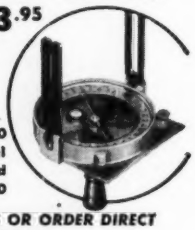
Length, 3¼"
Weight, 3½ oz.

$13.95

LEUPOLD
FORESTER COMPASS

Surveyor's staff compass of highest quality.

MODEL A $40.00
MODEL B — with vertical angle scale and sights, and 3-minute vernier . . $50.00



AT YOUR DEALER'S OR ORDER DIRECT
(No C.O.D.'s)

DEALERS: Write for information on Special Franchises.

L&S INSTRUMENTS Internationally Famous Designers & Manufacturers of Precision Instruments Since 1907.

LEUPOLD & STEVENS INSTRUMENTS, INC.
4445 N.E. GLISAN ST., PORTLAND 13, ORE.

heavier than Symonds' work, that is certainly not going to find its way to any campfires, but which is a major addition to scientific ornithological literature — this is **Birds of Alaska** by Ira N. Gabrielson and Frederick C. Lincoln (The Stackpole Co., Harrisburg, Pa., and The Wildlife Management Institute, Washington, 1959. $15.00). To this tremendous duet of talent has been added another: full-color illustration by Olaus J. Murie and Edwin R. Kalmbach—whose work is of the highest quality. However, the illustrations represent only a handful of the birds discussed. It is this absence of complete illustration that is most disappointing; that, and the choice of a heavy, coated paper which adds ounces to the book's weight — in actual poundage, one of the heaviest I own.

But with these disappointments aside, we can say that here is a work that would have done credit to these men had they done nothing else in their lives but prepare it. The scholarship is superb. The thoroughness of their product leaves nothing — aside from that matter of illustrations — to be desired. Yet both men have done so much else in their lives that one wonders how time was ever found for preparation of a giant work such as this. Gabrielson is president of the Wildlife Management Institute and former director of the U.S. Fish and Wildlife Service. Lincoln is a biologist with the Bureau of Sport Fisheries and Wildlife of the Department of the Interior. The birds of Alaska were fortunate that men of this caliber became interested in them — they have had a square deal, which is more than one can say for some birds!

The first few dozen pages are concerned with a general orientation. There are brief chapters or essays on such subjects as "History of Alaskan Ornithology," "Migration," "Introduced Game Birds," etc. Then follow 800-odd pages in which the birds are described, their "general range" discussed, and their "status in Alaska" examined. Sometimes this is varied with a section on "Haunts and Habits." It is a real *tour de force* which may not sell many copies at $15.00, but which will remain, as far as mind's eye can see, the comprehensive work on the subject and the standard reference for generations of professionals to come.

Sequoya

(*From page* 31)

1812, and when discharged in 1814 he married. An injury to his leg, the cause of which is variously reported, partially crippled him at some time during this same period, remaining an affliction throughout his life.

At an early age, Sequoya had already realized that the white man had a powerful weapon in his ability to record and transmit thoughts on paper, and that his ability to read and write gave him an advantage over the Indian. Inspired by a conviction that a set of characters or symbols could be devised to permit his people to express in writing the sense and sound of the Cherokee language, he began his serious work about 1809.

Tirelessly he worked, forming crude pictures in tree bark, on stones, and later with homemade pen and ink. After rather aimless experimentation, he was finally able to resolve a clear understanding of his goal. He first attempted to devise a system of characters to represent different words, but abandoned this method as it involved the use of too many characters. Then he finally hit upon the idea of dividing words into parts or syllables. Investigation showed that these parts or syllables of a definite sound could be applied to many different words, and that the total number of these syllables was comparatively small.

First devising symbols of numerous types to express these syllables, he later simplified them by adopting a number of English letters taken from an English spelling primer in his possession, and by making other symbols more comely to the eye. With the aid of his daughter he finally succeeded in reducing his two hundred original alphabetic characters to eighty-six.

His work met with the strenuous opposition of his friends and neighbors, and even some members of his own family. However, his perseverance of purpose was not to be thwarted, and he continued with his work convinced of the importance and value of his discovery.

While still engaged in his development of the alphabet, Sequoya moved westward to Arkansas during the year 1818 with other members of his nation, under the provisions of the Cherokee treaty of 1817. The treaty provided for the emigra-

tion to Arkansas of such Cherokees as desired to move and to join some thousands of their countrymen who had previously located there.

By 1821 he had progressed far toward the completion of his work, and he returned to the Cherokee nation in Georgia, bringing with him messages written in the characters he had already completed. In Georgia he finished his work, and then began the task of persuading his people to learn it.

Starting first with his own daughter and family he demonstrated to some of the most distinguished members of his nation that his alphabet could be learned quickly and easily. Experiments with selected youths followed, and the success of these experiments convinced his people of the value of his discovery.

The use of his alphabet became widespread, with Sequoya ever willing to write the alphabet for all who wanted it. Both the old and the young became versed in its use and, for the first time, the Cherokee was able to use the white man's weapon —the written word.

After completing his work and witnessing its adoption, he returned to Arkansas in 1822, carrying messages from friends and kin in Georgia to their people in Arkansas. The divisions of his nation in east and west were now bound by a new means—the written word.

Following the adoption of his alphabet, the Cherokee people in 1824 presented Sequoya with a silver medal as a token of their appreciation of the great service he had rendered. Accorded fame first by his own people, public recognition of his achievements became widespread.

In 1828 an iron printing press was purchased by the Cherokees with Cherokee and English type, struck in Boston. During February of that year the *Cherokee Phoenix,* the first Indian newspaper in an Indian language, began publication at New Echota, Georgia, the capital of the Cherokee nation. The paper continued in various forms until 1834, when it ceased publication.

Sequoya, in 1828, visited Washington as a member of a delegation representing the Cherokee people to request that the United States government fulfill certain promises in previously executed treaties. A new treaty was executed in 1828 by which the Cherokees agreed to exchange their lands in Arkansas for a new home in Oklahoma. The treaty also promised Sequoya the sum of $500

PROFESSIONAL BACK PACKING EQUIPMENT



for carrying... **FIRE PACKS • PUMP CANS • TWO-WAY RADIOS • CHAIN SAWS • RESUSCITATORS**

Made by the world's largest manufacturer of back packing devices. Himalayan Pak's basic design was used in the conquest of Mt. Everest... now developing the new Alpine and Arctic pack for the U.S. Army.

Lighter, stronger, more compact! Design features: free-floating, self-adjusting shoulder harness, helps wearer keep his balance—converts "dead" to "live" weight—rigid parts never touch the wearer —adjustable harness allows free arm circulation.

For free literature on our complete line write:

HIMALAYAN PAK

DEPT. AF-5 807 CANNERY ROW
P. O. BOX 1647 • MONTEREY, CALIF.

FOUR IMPORTANT McGRAW-HILL BOOKS

CONSERVING NATURAL RESOURCES, Principles and Practice in a Democracy, Second Edition. By Shirley W. Allen, Professor Emeritus, Department of Forestry, School of Natural Resources, University of Michigan. 370 pages, $6.75

SOIL CONSERVATION by Helmut Kohnke and Anson R. Bertrand, both of Purdue University. *McGraw-Hill Series in the Agricultural Sciences.* Ready in June.

FOREST FIRE: CONTROL AND USE by Kenneth P. Davis, Professor of Forest Management, and Chairman of the Department of Forestry, School of Natural Resources, University of Michigan. *McGraw-Hill American Forestry Series.* 584 pages, $12.00

NATURAL RESOURCES by M. R. Huberty, Department of Engineering, University of California, Los Angeles; and W. L. Flock, Associate Engineer and Lecturer, Department of Engineering, University of California, Los Angeles. *McGraw-Hill UCLA Extension Series.* In Press.

Send for Copies on Approval

McGRAW-HILL BOOK COMPANY, INC.
330 WEST 42ND ST. NEW YORK 36, N. Y.

CALIFORNIA LANDS

BY

SAMUEL TRASK DANA & MYRON KRUEGER



California Lands is the final report of The American Forestry Association's California Landownership Study. It deals with the State's land ownership problem and its influence on land management. This book can well serve as a working model for other states and should be read by everyone concerned with land ownership patterns. It is beautifully bound with colorful dust jacket.

308 Pages **PRICE $4.50** ***Postpaid***

10% DISCOUNT TO AFA MEMBERS

ORDER FROM

THE AMERICAN FORESTRY ASSOCIATION

919 Seventeenth Street, N.W. **Washington 6, D. C.**

in recognition of his discovery of the Cherokee alphabet.

During the year 1835 a printing press was set up in the western Cherokee country. This press, by 1861, printed more than 13,000,000 pages of books, pamphlets and Biblical material; a large percentage of it in Sequoya's characters. This volume of printed material played an important part in the development of the western Cherokee nation.

In 1841 the Cherokee National Council voted Sequoya an annual allowance for his discovery, and later modified the gift to an annuity of $300, payment of which was to continue after his death to his widow.

While in Washington as a delegate of his people he had conceived the idea of inventing another alphabet by which all Indians on the American continent speaking different languages could communicate with each other. Having retired from participation in the public affairs of his people, he devoted his time to this task, and visited numerous tribes in a search for the elements of a common speech and grammar.

In 1843, Sequoya, now 70 years old, set out from the western Cherokee nation to find a band of Cherokees who, according to tradition, had moved west of the Mississippi across the great plains in search of new lands. Veiling his mission in secrecy, and accompanied by a select group of fellow tribesmen, including his own son, he started on the long and arduous journey which was to be his last.

Contemporary reports, recently published and considered authentic, describe the old Sequoya's journey as one of continued illness and hardship. In weakened condition, his body racked by a constant cough, he finally arrived at his destination, San Fernando, Tamalpais, Mexico, where he once more found peace and rest in the village of a Cherokee people. It was here, in August of 1843, that he was reported to have died.

Bear Facts

(*From page* 15)

After the bear has been tagged and weighed, various standard biological measurements are taken. Total length, head length, ear length, fore and hind foot length and width, and tail length are all recorded. Much of this information is academic, but already some has proven useful. As

long as the information is readily available, why pass it up? For the same reason all scars, disfigurements, abnormalities, and parasites found on the bear are recorded.

In addition, careful notes are taken on the condition of bruin's teeth. Length and width of one of the canines or dog teeth are measured. Missing or broken teeth are recorded, and the amount of tooth wear is estimated. By correlating these data with those taken from known-aged zoo bears, an aging technique may be discovered. Then, when a bear is caught, his age can be estimated. Eventually the age composition of the entire bear population can be determined. This gives the biologists an idea of survival and mortality rates.

Now that the wildlife technicians have recorded these data from over 200 bears, what have they learned? Careful scientists that they are, they hesitate to draw many conclusions; they want more information first. However, they will give us some facts.

For instance, they found that at least some adult male bears travel long distances, for one was recaptured 20 miles from his first capture point. Some bears demonstrated a homing tendency. This was learned when certain bears which had consistently disrupted campers by making off with their food supplies were caught and had to be taken 30 or 40 miles away before being released. Some of these returned from distances up to 43 miles, much to the dismay of the campers they bothered. The biologists, nevertheless, welcomed them back because of the data they recorded. One such bear took only eight days to return 36 air miles to his first capture point.

Regarding weight, biologists have also learned several interesting facts. Many bears at 1½ years weighed only about 50 pounds. One bear at least 2½ years old weighed only 80 pounds. Despite the light weights of some younger bears, adults can attain astounding poundage. The largest bear caught weighed 605 pounds, and the second largest, 562. The latter bear had been tagged a year before and only weighed 332 pounds then. Thus he gained 230 pounds in one year. Other spectacular weight increases include a 92-pound gain on a 341-pound male and an 81-pound gain on a 236-pound male, both in only three weeks!

The wildlife scientists caution us about drawing conclusions from these facts; many of them are exceptions, and it will take more data to generalize. However, we can see from them that there is much interesting information connected with the bear. As bear facts continue to be uncovered and disseminated, bruin will become more understood —and the story of the three bears might take on a new light. Since the biologists have learned that bears have an average of three cubs per litter, maybe the old bedtime story will begin with, "Once upon a time there were *five* bears: a mama bear, a papa bear and *three* baby bears!"

A Westerner Looks at Wilderness

(*From page* 8)

their purpose well by settling our nation. When the national forests and other reservations were established, the government dedicated itself by law to manage these lands in the best interest of the people of the United States. Government also has a moral responsibility to protect, manage, and use its lands for the benefits of its citizens and their economy. How this obligation can be fully discharged with devotion of 50 million acres to a single-purpose wilderness is hard to understand.

"No group in this country can intelligently determine land use for millions of acres without intimate knowledge of their resources, problems, and prospects," Hagenstein stressed. "Neither can Congress wisely legislate single-purpose land use boundaries without having such knowledge."

Have proponents of this bill told the members of Congress or the public that only a very small proportion of the lands included in the proposed National Wilderness System have been covered by the government's system of land surveys, he asked? Have the proponents told the people that most of these lands have never been examined to determine whether dedication as permanent wilderness will preclude them from making their fullest contribution to society? Or that their one-purpose reservation will restrict job opportunities in mining, forestry, water development, grazing, and mass recreation? Or that their use and enjoyment by motorists, hunters, fishermen, picnickers, campers, skiers, swimmers, and boaters will be severely limited by the lack of roads?

A BORZOI BOOK

The perfect companion volume to Freeman Tilden's "The National Parks"

THE NATIONAL FORESTS

by ARTHUR H. CARHART

The famous conservationist and author of "Timber in Your Life" takes you on a guided tour through more than 180,000,000 acres of our National Forests. He covers the forest empire from the White Mountains in New England and the Chattahoochee in Georgia to Wyoming's Shoshone, Washington's Olympic and the untapped Tongass in Alaska. A fine book for all who love wild and primitive areas and an absorbing account of how the Forest Service balances the conflicting interests of timber men, cattle grazers, farmers, sportsmen and tourists.

24 pages of photographs
$4.75 at most bookstores

ALFRED A. KNOPF
Publisher

Aermotor Company
Has Supplied More
Fire Control
Towers to
Foresters
Than Any
Other
Manufacturer



"In Observation Towers,
the Standard of Excellence is Aermotor"
AERMOTOR COMPANY
2500 Roosevelt Road • Chicago 8, Illinois

TRAIL RIDERS

For the equipment you will need when you head up the wilderness trail this summer, turn to the supply house serving the nation's professional foresters.

You'll find everything you need, from all-weather flashlights to safe, comfortable sleeping bags—quality material designed especially for the use you will give it. And prices will be to your liking!

Send today for Catalog No. 8—and our special offer to Trail Riders. Do as foresters do—be outfitted by

Forestry Suppliers, Inc.
P. O. Box 8305, Battlefield Station
Jackson 4, Mississippi

Hagenstein also plowed into proponent arguments that 50 million acres of roadless wilderness will protect watersheds. How can the plants and trees on a watershed be protected against fire, insects, and disease if they are inaccessible, he asked. In fact, the bill was labeled an anti-water conservation measure by the witness, since "Everyone knows that in the arid parts of the West more water must be developed continuously for our rising population. This means impoundment high in many of the mountain ranges, which would be prohibited if they are included in a blanket wilderness system."

"Shear" Hard Work

(*From page* 7)

The present revival of topiary in Wildwood and Williamsburg keynotes the art being taken up on a small scale by an ever-growing company of small garden owners who are content to lavish their time and skill on small layouts or even single trees or hedge bushes.

Yearicks contends that the secret of effectiveness with any kind of clipped work is compactness and apparent solidity. Training is started when the plants are small. Each year's growth must be held back by hard pruning to force the heavy twig growth which gives compact foliage. The first severe prunings are followed by similar prunings throughout the growing season as the plant develops.

Topiary work is not done in a minute—or a season. Training and shaping require time and a great deal of patience. Mr. Yearicks indicates it takes an average of ten years to get the final shape.

His model of a bike rider took a mere nine years to complete, and his stagecoach with the horses required a similar period. Other exhibits include a windmill, a two-wheeled, old-fashioned buggy, two navy destroyers, and a romantic couple on the parlor sofa.

Yearicks is currently creating a Bible scene. The cross is made of ivy, and English boxwood is being used to depict the Lord's Supper. It will require a few years to complete this exhibit.

A miniature village is also "growing up," and will include a school, church, barn, and silo.

Yearicks, a man of modest income, thinks he may have spent up to $36,000 in materials and labor over the past quarter of a century in pursuit of his hobby.

He has spent over 20,000 hours on the hedge gallery, and used about 50,000 gallons of water to nourish the roots. And what does the artist of the pruning shears use in his trimming work? Some fancy cutters? Perhaps electrically operated? No indeed, he says—just ordinary hand shears. And he does not have any special formula for making his plants grow and thrive. He just plants them and gives them the ordinary care they deserve.

These remarkable hedge gardens, located near New Jersey's Garden State Parkway, in the world-famous resort section of Wildwood-by-the-Sea and Cape May are open all year around.

If you're down that way, take a look at what "shear" hard work can accomplish.

Small Farm Forests In Northern Germany

(*From page* 38)

enact new laws or to put more teeth into existing laws. The history of forest laws in Germany reaches far back into the past. As early as the 13th century the first regulations dealing with forest matters were issued. However, from the standpoint of conservation, they didn't matter too much. The removal of forest litter and cattle grazing, the worst enemies of sustained forest management, remained common practice up to the 20th century on farm forest land. The existing forest laws, aiming for the protection of forests, have turned out to be completely ineffective, as far as small holdings are concerned.

In spite of earnest efforts for almost 40 years, it has been impossible to enact a national law laying down basic standards for proper forest management. It was not until the period following World War II that some of the newly created German states passed forest laws, trying for the first time, as far as I know, to stimulate better management of small private forests. Today, four out of seven West German states in which private forest property plays

an important part have such laws. Only one of these laws, however, authorizes state foresters to supervise and control farm forests to a considerable extent. The others give private initiative a free hand by encouraging the continuation of a development which I will discuss later.

Only one state in the Federal Republic of Germany, namely, Lower Saxony, has so far no forest law. The comparison of developments there with those in her neighboring states will help you understand whether such legislation is an effective means of improving forest management and production in small holdings. Everybody concerned will agree that a modern forest law cannot limit itself any longer to certain restrictions; for instance, timber removal by large clear-cuts, improper thinning operations, cutting of immature timber, grazing, removal of forest litter, and clearing of woodland. To be effective it has to offer sweeping measures to improve timber production and to convert the basic attitude of small landowners. This can only be achieved by requiring reforestation, employment of professional foresters, and technical consultation, by furthering the formation of forest management units (FMU), and by financial aid with effective strings attached.

The fact that proper forest management requires a minimum size for forest land led to practical applications during the 19th century. At that time, liquidation of private privileges concerning grazing, timber, and litter-removal from state forests resulted in a transfer of formerly state-owned forest land into private hands. But this land did not become unrestricted private property. The respective farmers had to form an ownership-association under state supervision which saw to it that these new private forests were cooperatively managed. Furthermore, the subdivision of these ownership-associations was prohibited by law.

However, this historical pattern could not be employed without basic changes when the question arose whether to combine small forest properties into larger units to achieve more intensive forest management. A system had to be worked out which fully preserved the individual ownership rights. The program of the incipient forest associations could only be the cooperative management of individually owned properties.

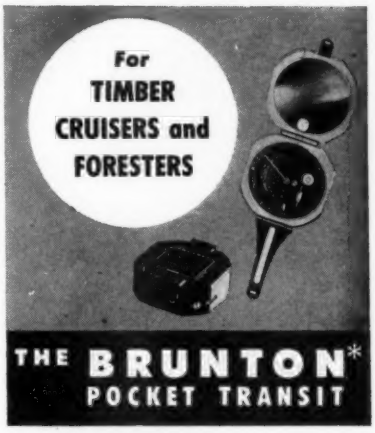
Another requirement for these associations was the willingness of each individual owner to join. Occasionally attempts have been made to force a minority to join without its consent, which, in the long run, have almost always failed. This was the reason why a national regulation on the foundation of FMU enacted in 1943 never became really popular in spite of sound basic principles. This law contained certain provisions which limited the right of disposal of the individual owner. For instance, a minority could be overruled on important issues, and the interference of state authorities was possible. This was enough to make the farmer suspicious that this regulation might mark the beginning of socialized farm forestry.

If you examine the bylaws of a great number of the associations, which have been established since 1945 however, you will encounter many good features of this regulation of 1943.

The story of the establishment of FMU or associations in the North and West German states, to which I will limit myself, has been a manifold and variegated one. In a review of this story, however, the fact emerges that eventually developments in these states have been guided by the same basic principles. Today you can discover that many differently named organizations are aiming for the same goal — to improve timber production and conservation in small private forests.

In Hesse, a heavily forested, hilly country, with 60 per cent private forest land, you will find that the so-called "Forstbetriebsvereinigungen" (Forest Management Associations) are most popular. In addition there exist two similar kinds of ownership-associations, with a rather old history. The bylaws of the newly established forest management association meet the following basic requirements: 1) voluntary membership, 2) minimum size for each association, 3) a period of notice of not less than 2 years, 4) an established membership will remain unaffected by sale or succession, 5) one management plan will be effective for all forest land concerned, 6) the association has to employ at least one full-time professional forester, and 7) the association has to be approved by the state, but any supervision and/or inspection is up to the Chamber of Agriculture.

The trustees as well as the chairmen and the treasurers are to be elected by and from the members. They are responsible to the membership assembly only. This offers



THE BRUNTON* POCKET TRANSIT

IT'S HANDY...
weighs only 9 oz.; 2¾" x 3" x 1⅛"; easy to carry in pocket, on belt, in car.

IT'S VERSATILE...
ideal for preliminary and supplementary surveying; used as a compass, transit, level, plumb, alidade, clinometer. Shows direction to 1°; level, slope or grade within 1°.

IT'S MADE TO LAST A LIFETIME
"Over 60,000 Brunton Transits since 1896"

See your local engineering supply house or WRITE FOR CATALOG

*Brunton is a registered trademark of

WM. AINSWORTH & SONS, INC.
2151 LAWRENCE ST. • DENVER 5, COLORADO



An authoritative, up-to-date, nontechnical guide to

TREE MAINTENANCE

By P. P. PIRONE

Third Edition

This third edition contains a great deal of new material and many new illustrations on such subjects as: feeding trees *via* soil and foliage, transplanting shade and ornamental trees, pruning, bracing, care after storms and hurricanes, diagnosing tree troubles, non-parasitic injuries. "Homeowner, gardener, nurseryman, forester, or just tree lover—each will find in this new edition . . . answers to all problems connected with the growing of trees . . . discusses tree culture from planting and transplanting, soils, pruning, pests and diseases to lists of trees for specific uses and locations." — MARJORIE JOHNSON DIETZ, Managing Editor, *Flower Grower, The Home Garden Magazine.* 19 line cuts; 130 half-tone plates. Get a copy at your bookstore or use the coupon below.

OXFORD UNIVERSITY PRESS, Inc. AF
16-00 Pollitt Drive, Fair Lawn, N. J.
Gentlemen: Please send me postpaid TREE MAINTENANCE. Enclosed is $10.00. If not completely satisfied, I may return the book within 10 days for a refund in full.

Name _____
Address _____
City _____ Zone____ State____



SEEING AMERICA'S WILDLIFE in Our National Refuges

by Devereux Butcher

348 pages **map**

360 photographs

This book, the only popular guide to our 270 wonderful national wildlife refuges under the care of the U. S. Fish and Wildlife Service, is designed to help you plan your summer trip. Extending from Maine to California and from Alaska to Florida, the refuges are almost unknown to the traveling public, yet in them at certain seasons you may see wildlife in abundance approximating primeval times.

Seeing America's Wildlife, by the author of the immensely popular book *Exploring Our National Parks and Monuments,* vividly describes the more important refuges, tells how to reach them, what birds and mammals you may expect to see in each, and tells where to stay overnight. It outlines the origin of the refuge system, explains its importance to wildlife, and warns about threats of destructive commercialism.

Seeing America's Wildlife contains the most elaborate, magnificent collection of North American wildlife photographs ever assembled in one book. Taken by our nation's outstanding wildlife photographers, including dozens by the author himself, they literally range from condor to hummingbird and from moose to mouse, all shown in their natural habitats.

And that is not all. **Seeing America's Wildlife** describes many private sanctuaries, and it contains among others a chapter about vanished and vanishing species. To be sure you have your copy by vacation time, order it today from your local bookstore, or fill in and mail the coupon with your check to:

The Devin-Adair Company
23 E. 26th St., New York 10, N. Y.
Please send me ..... copies of Seeing America's Wildlife, by Devereux Butcher

☐ **Paperbound $2.50**
☐ **Clothbound $5.00**

Name .....

Address .....

City ..... **State** .....

an opportunity for independent action beyond the minimum requirements. They may, for instance, organize joint timber sales for all members, and may undertake concerted efforts for reforestation.

In North Rhine Westphalia, the most important industrial state of Germany, private forests, nevertheless, cover quite a large area (70 per cent out of the total forest land, or 1.4 million acres). As far back as 1919 another type of association was organized, the so-called "Silvicultural Association." About one-third of all private forest land was organized. These associations actually did not perform a very effective job. They confined themselves to a more or less casual consultation, did not employ professional foresters, and had no restrictions with respect to the cancellation of membership. For these reasons they did not last long, and disappeared completely after 1933.

In the following 12 years nothing was accomplished worth mentioning, but since 1947 quite a change has taken place. Scores of FMU have been put into operation by private initiative, and in 1950 a state law gave them legal standing. Today, more than 400 organizations of this kind are operating, all of them on a voluntary basis. Their bylaws, however, have to meet certain requirements which are essentially the same as outlined above for Hesse. The State Forest Law of 1950, however, has a provision by which the majority can overrule the objections of forest landowners, in order to force them into membership. In such a case, a grace-period of at least one year has to be granted, and the state authorities have to confirm the measure. Thus far no action of this kind has had to be taken.

Let us look now at Lower Saxony. In this state farmers became especially interested in and, to some extent, dependent on their forests as a result of the poor quality of land in large parts of the state. Therefore, the agricultural crops were limited and many farmers were forced to earn additional money from the forests they owned. I am tempted to say that in spite of the different climate, one could draw comparisons between the North German plain region of Lower Saxony, extending from south of Hamburg and Bremen west towards the Dutch border, and some of the southern states in the U. S., for instance, northern Florida, southern Georgia, and South Carolina.

In Lower Saxony "Silvicultural Associations" were founded about 40 years ago. In contrast to the Rhineland, a Forest Extension Service was built up as early as 1905 as part of the Chambers of Agriculture. Professional foresters (rangers) took care of the local consultations, while forest inventory work, the preparation of management plans, long-term planning for forest protection, as well as timber market research, were carried out by fire district offices.

As a result of the very effective way these extension foresters handled the affairs of the individual forest land owners, an understanding of the benefits and necessities of intensive forest management grew. This provided the spade work, so to speak, for the formation of associations and cooperatives.

In Uelzen county, about 60 miles north of Hanover, the most decisive break-through took place. In that instance, 85,000 acres of forest land, owned by about 2,000 individual farmers from 190 communities, were pooled, 11 professional foresters were employed, and voluntary cooperative management of this area became a reality. Ninety-three out of 100 farmers in this county joined what soon became well-known all over Germany as the "Waldmärkerschaft Uelzen." This organizational pattern is similar to what you would call a "co-op."

Cooperative management ranges from surveying and planning to logging and tree-planting. The "co-op" even provides credit on favorable terms for reforestation and rehabilitation of devastated land. The "Waldmärkerschaft Uelzen" still is an outstanding example of what can be achieved by voluntary action. Timber production has gone up, all forest land belonging to the association members is in satisfactory shape, and the cash receipts per unit are larger than any individual farmer can expect to get. Also, there is no backlog in thinning operations, and the protection against fire, insects, and diseases is almost as good as in any state forest.

You may well understand the importance of these benefits if you consider the poor farmland in this area. Nevertheless, every single owner of forest land within the co-op still has the full power to dispose of this individual piece of land.

I spoke at length on the Uelzen story because this stimulating example started a movement which put Lower Saxony in first place with respect to cooperative management

of private forest land. Beginning shortly after the end of World War II, a program was launched which led to the formation of a great number of forest management units, all of them following the guiding principles of the Uelzen co-op, but not one reached the same organizational strength.

In North Hanover, about 500,000 acres of small forest farm land are today under unified management of one kind or another. This means 83 per cent of all forest land in this category was voluntarily organized in 50 associations, with a membership of about 12,000 forest landowners. Eighty professional foresters, employed by these organizations, are working full time at the job. The by-laws spell out an almost identical program, not very different from those mentioned for Hesse. Supervision is carried out by the Chambers of Agriculture, and there is no interference by the state and its forest administration.

(To be continued next month)

Maple Blight

(From page 21)

materials. The only possible course at this stage was to prepare for the worst.

The summer of 1957 was drawing to a close and the trees would soon become dormant, so little could be done in the field until spring. Now was the time to plan next year's strategy. Representatives of the Northern Hemlock and Hardwood Association, Connor Lumber and Land Company, Calumet and Hecla, Kimberly-Clark Corporation, the Wisconsin and Michigan Conservation Departments, the Universities of Minnesota, Wisconsin, and Michigan, the Michigan College of Mining and Technology, and the Forest Service, U. S. Department of Agriculture, pooled their information and observations in a preliminary appraisal of the problem and needed research. The Lake States Forest Experiment Station was asked to organize a coordinated research program to deal with this new problem.

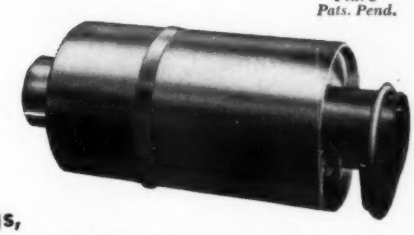
Information available at that time showed the maple mortality to be present over some 10,000 acres; about 750,000 board feet of maple timber had been marked for salvage. In addition, thousands of young maples too small to be merchantable had been killed. Most of the area affected, however, still was confined to the lands of the Calumet and

Exhaust-spark trappers cut forest fires

The GILL Spark Arrestors are almost 100% efficient—

for trucks, tractors, tugs, forklifts, loaders, stationary engines, harvesters, etc.

Ptd. & Pats. Pend.



SAFETY pays off for you—when you trap dangerous exhaust sparks.

You prevent costly fires. You thereby protect your own property and the property of others. So use the Gill Spark Arrestors on all your equipment working in hazardous areas.

As they trap almost 100% of the exhaust carbon from internal-combustion engines, forest rangers and fire wardens are all happy when you use Gill Spark Arrestors.

Designed by experienced engineers and built by careful workmen to give you long, faithful service, these spark arrestors have exceeded all tests for reliability and safety. The Gill Spark Arrestors are ready now to protect you from the risks of dangerous fires.



For full details about Gill Spark Arrestors for all gas and diesel engines, write to us.

ERICKSON PRODUCTS CO.
1960 Carroll Avenue
San Francisco 24, California



BARTLETT TREE TOOLS

Are Used Throughout the World Where Quality Counts





No. 41—UTILITY SAW
20" or 24" Tuttle Tooth Blade



No. 114B—26
Special Utility Saw
4 teeth per inch

No. 44
Pole Saw



No. 1W—Compound
Lever Tree Trimmer
Poles up to 16'

No. 777—26" Handle
Lopping Shear



Send for Catalog and Special Prices

BARTLETT MFG. CO.
3019 E. Grand Blvd. Detroit 2, Mich.

SAVE ABOUT 1/3
FACTORY TO YOU!



ORDER BY MAIL

Eddie BAUER
World's Finest Sleeping Bags

PROVEN!
Rated the finest by expedition leaders, guides, mountaineers, foresters, authorities everywhere. READ WHAT OTHERS SAY. Made exclusively in our own factory under U. S. Patents. Sold direct to you only — never through dealers . . . never under other brands.

COMPARE!
Order Without Risk any Eddie BAUER sleeping bags—singles, twin sets, mummies, station wagon bags. Compare with others of similar quality. If you do not agree you save about 1/3 and that ours are finer in every way, return for prompt full refund . . . including shipping costs both ways.



FREE!
48-page Catalog
SEND FOR YOUR COPY TODAY
Before you buy any sleeping bag, insulated underwear or insulated clothing GET THE FACTS about insulation. Read what authorities say.

Eddie BAUER DEPT. A
160 JACKSON ST. • SEATTLE 4, WASHINGTON

Hecla Company, and no species other than sugar maple was affected.

At this time, the term "maple blight" was given to this problem to distinguish it from maple dieback. Dieback frequently occurs in maple stands following a period of unfavorable environmental conditions such as may be caused by logging and periods of drought. Dieback, however, is usually limited to the large overstory trees, whereas the present mortality was occurring on trees of all size and age classes. Mortality resulting from dieback is usually not extensive and rarely occurs in patches within the forest.

As a program for research was developed, the various agencies took on responsibility for parts of the job. Location of new blight areas was to be handled through the regular cooperative forest-pest detection network. This was the job of the conservation departments of Michigan, Wisconsin, and Minnesota. Appraisal of new areas reported and research on possible causes were to be handled by the Entomology and Pathology Departments of the University of Wisconsin and by the Lake States Forest Experiment Station.

To expedite the research program, a financial grant was made by the members of several private forest industrial associations and individual companies interested in sugar maple. These included the Northern Hemlock and Hardwood Manufacturers Association, the Maple Flooring Manufacturers Association, and the Birch Club. The purpose of this grant was to start and maintain the research program until funds could be obtained through normal channels.

In the spring of 1958, when the leaves began to unfold, the forest scientists began their fieldwork.

Reports of sick sugar maple scattered throughout Michigan and Wisconsin began to arrive from the detection crews. The men responsible for checking these reports were kept busy determining whether or not maple blight was present on these newly reported areas.

Most of the areas checked showed severe dieback only. One area located in Iron County, Wisconsin, however, was identified as having maple blight.

The rate of dying from maple blight was much slower during the summer of 1958 than during the previous year. Although individual trees continued to die, this amounted to only a fraction of the 1957 mortality. Rather than entire trees dying within a short period of time, many trees died in stages, with one branch at a time going out. Many trees which showed blight symptoms in early spring were still living at the end of the growing season. Most of these trees, however, lost an additional portion of their live crown during the summer.

Early inspection of the blight area had indicated that the kill was confined to small patches in which almost all trees were affected. Later, a dozen examinations revealed a scattering of dead and dying trees throughout the adjacent stands for a considerable distance from these focal points of infection.

Within the original blight area, no rapid outward spread was observed. With the exception of the new area reported in Iron County, the affected area remained generally within the 1957 boundaries. However, Calumet and Hecla salvaged another three-quarters of a million board feet of infected sawtimber during the fall and early winter of 1958.

The unusual number of maple dieback reports brought forth a new problem. Although not a fast killer or reducing the vigor of sugar maple like maple blight, dieback was reported to be killing or reducing the vigor of sugar maple trees over a large area. From an over-all economic standpoint, dieback could prove to be even more serious than maple blight.

Isolations from diseased sugar maple were made throughout the growing season by forest pathol-

VOLCLAY Wyoming Bentonite

Especially prepared for
Fire Retardant Gel

AMERICAN COLLOID COMPANY
5100 SUFFIELD COURT • SKOKIE, ILLINOIS

ogists. Many fungi and bacteria were recovered and inoculated into healthy sugar maple trees. No maple blight symptoms developed on the inoculated trees during the summer.

Studies to determine the role of defoliating insects were initiated in May and carried on throughout the growing season. Artificial defoliation was tried. Some mortality was observed in young saplings after only one defoliation. In addition, bud injury due to fall frost was found on many trees defoliated during late summer. The entomologists found that at least three leaf-eating insects had taken part in defoliating the blight area. These were two types of leaf rollers and a webworm. However, during the summer of 1958 very little maple defoliation occurred. Nature's biological control was taking place. A high population of parasites built up, causing considerable mortality among the defoliating insects. This, combined with abnormally low temperatures throughout the summer, resulted in a low population of both leaf rollers and webworms within the blight area.

Throughout the summer, the ecologists were busy looking for environmental factors which might have helped cause maple blight. Two factors showed up as being important. These were stand density and composition. The highest percentage of infected trees was found in open stands and in stands made up primarily of sugar maple. These factors, by themselves, however, did not cause the maple blight. They merely reflected the fact that some other agent causing the mortality was influenced by them. Whether this other agent was an insect or a disease, no one can say at this time.

Further study will be required before the complete picture of maple blight is unfolded. Present evidence indicates that a combination of factors, all working together, are responsible. Forest scientists will continue their work to determine the cause and possible control of this latest threat to our forests.

The C & O—Park or Paradox

(*From page* 23)

son, thousands of hikers, bird watchers, cyclists, fishermen, horsemen, ice skaters and others now enjoy themselves, only faintly mindful of that distant day when mud-covered mules stoically slogged endless miles back and forth along the towpath.

Once a business enterprise, the C. & O. Canal now is a recreationist's paradise. And happily so, because Washington and its burgeoning suburbs are direly in need of healthful and relaxing outdoor playgrounds. In Washington and in some up-river towns, the canal is just across the street, enclosed in a cathedral of towering trees, and flanked with dogwoods and other understory flowering plants. For many thousands it is seldom further than a bus or trolley ride. And to those who can take the time, limited access points throughout its length place the canal and the adjacent river within a convenient distance for upwards of 5 million persons.

At its recent hearing in March, the public lands subcommittee of the House Interior and Insular Affairs Committee considered testimony on four bills, each related in some way to the historical park proposition.

Bills by Representatives John P. Saylor of Pennsylvania and John R. Foley of suburban Maryland, H.R. 953 and H.R. 2331, focus directly on the park, with the Foley bill containing an added proviso to the effect that the historical park should not bar water projects that might be authorized by Congress at some future time. Conservationists contend that the proviso gives Congressional recognition to Washington's water supply situation and gives some measure of comfort to those who fear for it. One Congress cannot bind another, however, and in practice the proviso is a statement of intention to serve as a guide to some future Congress which could authorize a dam in any of the national parks if it so chooses. These two bills, H.R. 953 and H.R. 2331, are supported by park enthusiasts throughout the country.

Two other identical bills, also before the subcommittee, contain both that proviso and a more specific reservation of 35 miles of the canal for a large impoundment at River Bend dam site, about 15 miles upstream from Washington. These bills, H.R. 5194 and H.R. 5344, by Representatives Foley and Richard E. Lankford, of Maryland's Eastern Shore electric cooperative region, also would prohibit expenditure of any funds for recreation development within the area of the proposed dam.

Mist Blo 26C
The one shot all purpose spray concentrate which helps STOP The spread of DUTCH ELM DISEASE

New Improved formulation contains "WEATHER-X"
Special anti-weathering assures longer residual control!

CIC

Chemical Insecticide Corporation formulates a complete line of Insecticides, Herbicides, Wood Preservatives, Rodenticides, Weed Killers, and Foliar Plant Food, used in the shade tree and public health fields.

Send for a free booklet to help solve your particular problem. Write: Dept. AF

CHEMICAL INSECTICIDE CORPORATION
30 Whitman Avenue, Metuchen, New Jersey
Liberty 9-2300

To Those Serving Our Nation **Kind Regards** and May God's Holy Word Ever Be Your Guide

•

The Mark Leetonia on Scrapers, Scaling Hammers, Marline Spikes and other marine tools and also on any tools we manufacture for the Ship Chandlery, Hardware and Mine Tool trade is the assurance of Good Serviceable and Dependable Tools. To Wholesale Distributors and Government Departments our catalog free upon request.

•

THE LEETONIA TOOL COMPANY

LEETONIA, OHIO, U. S. A.

The D. C. Commissioners and the Secretary of the Army, acting for the Corps of Engineers, also would be given veto power over the National Park Service's plans for development and improvement of the entire canal project.

All four bills would enable the National Park Service to acquire up to 15,000 acres of land, minus the present holdings, for expansion of picnic and camping areas, access roads, parking lots, and for the protection of historic locks, lock houses, aqueducts, and tunnels.

Because of these two sets of widely divergent proposals, the park no longer is the principal issue. At issue are the reservation and escape clauses that the rural electric groups hope to get into the park authorization bill. That is, if a bill should be enacted. Its opponents clearly view the park proposal as a threat to their hoped-for TVA-like development of the Potomac Basin. They know the public's insistence that water development and national parks be segregated and are making a test case of their doctrine of "multiple use" for the Potomac Basin. The C. & O. Canal bill is merely the vehicle that has been chosen for the test.

Rural electric cooperatives, by law, have preferential use of power that may be generated at federal dams. The cooperatives' position on the park project was brought to the surface during the House hearings last year, when a committee member asked whether the cooperatives would support or oppose the bill seeking to create the historical park if the Army Engineers recommended that no hydroelectric power be developed on the river.

The reply was that the cooperatives' position in that event would not be clear. "Our basic interest," the witness continued, ". . . is in the hope that the Corps of Engineers will favorably report upon the feasibility and desirability of including hydroelectric power in the river if it is developed."

The witness also declared that if the cost of the power delivered to the cooperatives from any dam was more than what the cooperatives presently were paying for other power, they would want "none of it." At this year's hearings, an Army Engineers' spokesman said that any power that might be developed at River Bend Dam would be *incidental.*

According to the Washington *Evening Star* of March 4, 1959, Representative Foley's second bill was written and handed to him for introduction by staff aides of the House Interior Committee. The article continued, "Staff members seldom draft such controversial legislation without explicit approval of the committee chairman—in this case, Representative Aspinall, Democrat of Colorado.

"Mr. Aspinall traditionally has been sensitive to the need for long-range planning to protect the nation's water resources."

Representative Saylor, a recognized champion of the national parks, characterized the Foley-Lankford bills during the hearings as "fifth column." The blunt-spoken Pennsylvanian, who was given a national award by major conservation groups last year, charged that the identical Foley-Lankford bills were drawn up by persons who for years have been trying to figure a way to open national parks for water development projects.

Under committee examination, the park opponents found the reservation in the Foley-Lankford bill for an impoundment at the River Bend site difficult to defend. River Bend Dam once figured prominently in planning for Potomac River development. It again is being rumored

COUNCIL FORESTRY TOOLS

PLANTING & FIRE SUPPRESSION
SWATTERS—LW-12 FIRE RAKES—BUSH HOOKS
AXES—PLANTING BARS—SPECIAL TOOLS

THE COUNCIL TOOL COMPANY

Fine Edge Tools Since 1886

Wananish, North Carolina

MEMBERSHIP APPLICATION

THE AMERICAN FORESTRY ASSOCIATION
919 17TH STREET, N. W., WASHINGTON 6, D. C.

Please enroll me as a Member of The American Forestry Association. Enclosed find $6.00 to cover dues for one year, (Including subscription to AMERICAN FORESTS Magazine). My name and address is:

Name _____

Street _____

City and State _____

as the prime recommendation in a new Corps of Engineers study of the basin. There are no signs that the public is ready to accept such a recommendation and the chances for its approval in Congress are dim. Hence the effort in the Foley-Lankford proposal to obtain indirectly what might be called a tactical advantage by reserving the dam site for a dam that may never be built is nebulous at best.

Park supporters have pointed out time and time again that the canal property already is owned by the federal government and is being administered as a unit of the national park system. Merely elevating its status to a national historical park, it is argued, has little actual import on the question of whether a large dam which might flood a great part of the park can be built on the Potomac. Should such a dam ever be recommended, conservationists say, its authorization will have to be resolved at that time and not now. The dam and its effect on the canal would be only one of the many facets that the Congress and the public would have to investigate thoroughly.

Public opinion scuttled River Bend Dam in 1929 and 1938. It was exhumed in 1946 when the Corps of Engineers filed a proposed Potomac development plan with Congress which boasted a 14-dam complex on the main river, beginning with River Bend and working upstream into tributaries in Virginia and West Virginia. The Corps of Engineers never did approve its own 1946 plan, however.

While the rural electric cooperative groups oppose the park plan because of a relationship which they say will jeopardize "multiple use" development of the basin, other less-vigorous objection to the park rests on its alleged threat to metropolitan Washington's water supply. There is a wide and understandable diversity of opinion as to the future water needs of metropolitan Washington. Population growth, per capita water consumption at some future date, and water flow expectancies in the Potomac all enter into the arguments. Some state that the expected cyclic return of low flow to the river would be insufficient to provide raw water for purification and still leave enough in the river as it flows past Washington to flush pollution downstream from that point. Others say that the lowest flows ever recorded in the Potomac in 1930 exceed by 22 per cent the maximum estimated need for the year 2000 as anticipated

If forest fires are **YOUR** *problem*

√ *check with* **PACIFIC**



Illustration shows streams from Type BE, low cost, portable (180 p.s.i., 8 gals per min.) and Type Y (225 p.s.i., 20 gals. per min.)

fire pumps • fire extinguishers • hose • nozzles—all types • spark arrestors • light plants • complete line of all types of fire fighting equipment •

send for catalog and prices

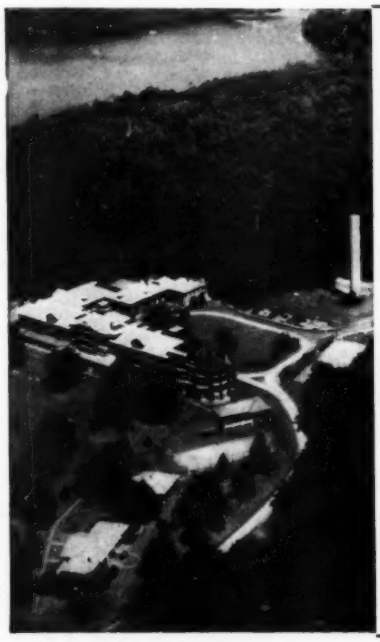
PACIFIC MARINE SUPPLY COMPANY

FIRE EQUIPMENT DIVISION

SEATTLE 1, WASHINGTON

When Writing Our Advertisers Please Mention

AMERICAN FORESTS



CRESTMONT INN

For You, Your Family

Take your vacation at this perfect spot atop the Allegheny Mountains. Days are warm, nights refreshingly cool.

Swim, boat, canoe in the large natural Lake of the Eagles. ***Ride or hike*** along picturesque wooded trails, quiet country roads. ***Play tennis, lawn bowls, shuffleboard. Try your golf skill*** on the new pitch and putt course. (There's a beautiful regular course, too.) Golf and tennis pros are available for your instruction. ***Enjoy concerts, dances, movies*** in the evenings. Choose as many activities as you wish—or just relax and look at the view from a long wide porch. ***Children of all ages are welcome.*** Programs and directors for tots and teenagers.

Modern rooms and cottages, delicious meals, informal atmosphere—all geared to your comfort and pleasure.

Make yours a perfect vacation. Make it a vacation at Crestmont Inn.

Opening June 15 — Write for Folder

CRESTMONT INN, Eagles Mere, Pa.

W. T. Dickerson, President

Perfect Ground Cover for Banks and Shady Places

MYRTLE (Vinca Minor)
A neat, sturdy creeping plant that stays green all winter. Blue flowers in May. Resists insects, disease and drought. Our big heavy clumps with 12 or more stems can be planted 2 ft. apart on level; 1½ ft. on slopes. You cover big areas for little money.
100 BIG CLUMPS $15.00—1000, $120.00

HARDY EVER-GREEN IVY
Baltic Ivy defies dogs, children and drought. Steep slopes, sun or shade. Space 1 ft.
25 POTS, $7.50
100 $26.00

PACHYSANDRA
Thrives under trees and in poor soil. Beautiful shiny evergreen leaves. Space 6 in. apart.
100 PLANTS, $9.50
1000, $85

KELSEY NURSERY SERVICE
Highlands, N. J., Dept. D-28

25 for $5. TREES ..
3 to 5 yr. healthy, selected trees, 8" to 16" tall. 5 each of: Colorado Blue Spruce— Norway Spruce — Austrian Pine — Scotch Pine — Douglas Fir.
Postpaid at planting time
Write for Free Evergreen Catalog
MUSSER FORESTS Box 27-E Indiana, Pa.

CUTTING TOOLS For Weeds Brush Briars
LIGHT — EASY TO USE — RAZOR SHARP — SAFE
Also Heavier Models for Forestry Work.
WRITE FOR **FREE** *ILLUSTRATED FOLDER.*



THE VICTOR TOOL CO.
OLEY 465 PENNA.

AFA MEMBERSHIP

Any person or company may become a member of The American Forestry Association upon application. There are five classes of Membership:

Subscribing, per year	$6
Subscribing, 2 years	11
Contributing, per year	10
Sustaining, per year	25
Life (for individuals) no further dues	150
Patron (for individuals) no further dues	1000

All members receive monthly copies of AMERICAN FORESTS Magazine.

by the sanitary engineer's office for the District of Columbia.

Some argue that a satisfactory source of fresh water is the 25-mile stretch of the Potomac lying between Washington and Indian Head, Maryland. With proper pollution abatement and treatment facilities in Washington, the proponents of this plan say, a pumping and distribution system, plus purification plants, would yield about 52 billion gallons of water.

The Army Engineers presently are re-studying the Potomac Basin under a 1956 directive of the Senate Public Works Committee. The Engineers have not been successful in obtaining appropriations and, under the circumstances, their final report most likely will not get to Congress until the late 1960's, at the earliest.

This fact seemingly makes support for the River Bend Dam reservation in the Foley-Lankford bill even more indefensible. Any large impoundment that might be constructed on the Potomac near Washington, in the normal course of events, would not be initiated until well past the mid-1970's. And many hurdles lie in the way of federal dam construction. A dam must be recommended, accepted both by the public and Congress, authorized, and funds provided for planning and construction before actual field work begins.

Congress has been given a strong answer to the park paradox. At the 1957 Senate hearings, at last year's House hearings, and again this year, the spokesmen for the Army Corps of Engineers, the Commissioners of the District of Columbia, and the National Park Service have testified for the record that the proviso in H.R. 2331, which specifies that the historical park should not bar future water development, adequately safeguards metropolitan Washington's water supply.

With reference to specific reservation of land for the River Bend dam, a Corps spokesman said, "We feel in preliminary studies that considerable storage is going to be required. Whether it will have to be on the main stream or whether it can be placed on the tributaries, we are not yet prepared to say."

A spokesman for the District of Columbia's sanitary engineering office also said, "There may be considerations when all of the facts are known which would make a nearby impoundment impracticable financially or otherwise."

Lands that would be acquired for park purposes within the reach of River Bend dam never will be less expensive than at present. Urban developments are pressing close to the canal in some sections, and the land prices probably never will be cheaper. Should River Bend dam ever be authorized and built, the land that is acquired now for the historical park would be turned over for the impoundment. It is entirely possible that the land savings alone would more than offset the nominal costs of access roads, parking lots, trails, and picnic areas that the National Park Service proposes in the contested area. If the world's richest nation can afford to pay more than $1 million daily for storage of surplus agricultural products that never will be used, park supporters reason, there should be little objection to investing a few thousand dollars in modest recreational features for the canal historical park.

Recreational opportunity is needed now. It appears unreasonable to ask that the people delay their recreation for 15 to 20 years simply because some persons fear that creation of the historical park would block access to a water supply that metropolitan Washington might need at some future time. The bill that has been introduced, H.R. 2331, already makes provision for that eventuality.

In the face of this overwhelming unanimity, the Chesapeake and Ohio Canal National Historical Park is not paradox; it is a must.

START YOUR OWN TREE FARM

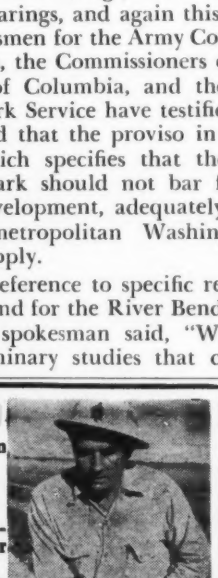
McCurdy Bros. Seedlings Have Built-In Growability that Provides Profits.

MID-WEST'S LARGEST PINE TREE NURSERIES

40 Million Highest Quality and Most Reasonably Priced Seedlings on the Market for Spring Planting.

TREE FARMS FOR SALE— Write Dept. B Manton, Mich., for full information.

McCurdy Bros. Nurseries



Gordon McCurdy with 2-year-old Scots pine seedlings.

Howdy the Raccoon

(*From page* 14)

sources and their conservation."

Other programs and activities relating to the problem were studied. These included Smokey Bear, Don't Be a Litter Bug, Woody, Landowner —Sportsmen, Clean Streams, Tree Farming, Keep America Beautiful, Keep Pennsylvania Green, and Conservation Good Turn and other

projects of Boy Scouts, Girl Scouts, 4-H Clubs, FFA boys and other youth groups. Consultation with leaders and sponsors of these worthwhile activities seemed to point to one great need—a central theme around which a more forceful and tangible educational program could be built.

So, after more than two years of study and consideration of the problems involved, it was unanimously decided that a thoroughly cooperative educational effort should be launched, centered around the slogan "Have Good Outdoor Manners." It was not a hasty decision, but we believe it was a logical and necessary one. A. C. McIntyre, a forester by profession and unpaid editor of *Pennsylvania Forests*, and a born enthusiast on natural resource matters, is credited with coming up with the exact wording of the slogan.

D. E. Hess, vice president of the P. H. Glatfelter Company, had recommended that the P.F.A. board consider sponsoring a conservation education program among the school children of the Commonwealth. He had observed the very effective school bookcover and poster contest sponsored by Virginia Forests, Inc., centering on the theme "Plant More Trees." The board asked Hess and McIntyre to make a more detailed study of the Virginia program and report their findings and recommendations. Collaboration with U. S. Forest Service and state foresters brought out the many reasons for the unprecedented success of the Smokey Bear program. Mac's enthusiasm really mounted. We had Bill Cooper, executive director of Virginia Forests, Inc. return to his home state of Pennsylvania to address the annual banquet of P.F.A., at which time he added further enthusiasm to the possibilities of conservation through schools. Mac, Cooper, and Hess literally sold all concerned that the best way to reach an educational goal of this kind was to start with youngsters in the habit-forming stage. "Witness the success of Smokey," they said. "We must create something that will do for outdoor manners what Smokey has firmly implanted in the minds of people, especially youngsters, about fire prevention." Someone else said, "Smokey needs a partner."

Along about this time the P.F.A. board learned that Mac might want to retire a few years early from his forestry job with the Soil Conservation Service to spend more time with his Christmas tree growing enterprise and do some more of the fishing which he loves so well. The P.F.A. was immediately faced with a problem. Under those circumstances we knew we could no longer ask Mac to edit *Pennsylvania Forests* without pay. One member of the board posed the question, "Why not employ Mac on a part-time basis to edit the magazine and to become Project Director for the Good Outdoor Manners Educational Project?" Such an arrangement took effect July 1, 1958. Since that time, Mac's enthusiasm for the project, as well as that of all with whom he works, has zoomed. He works practically full-time at it and often double time —on part-time pay.

The project presents both enjoyment and problems to Mac, as well as to some of the rest of us who had no idea of its snowballing possibilities. Mac has other little worries also. He "cogitated," as he says, for long hours as to what would be the best symbol for the project. His cogitation always seemed to take him back to the raccoon as the best idea he could come up with. "But," thought Mac, "it must be a friendly, convincing, and commanding raccoon." He took the idea to several artists who submitted sketches. Finally Ned Smith, who does outstanding wildlife art on a free-lance basis, much of it in the *Pennsylvania Game News*, came forth with the raccoon personality that was finally adopted. (The version on the cover of this issue of AMERICAN FORESTS is the prototype.) This character will be used in various poses to teach numerous conservation and good outdoor manners lessons as time goes on. There is evidence that this will happen not only in Pennsylvania; several people and organizations from other states have already expressed keen interest in "Howdy."

With small prints of the prototype, and preliminary objectives as outlined by a P.F.A. committee, Mac started his contacts with every conceivable agency and organization that might be interested. This brought forth his biggest worry, as stated in his interim reports to me: "There has got to be something wrong with this idea somewhere, but by Jacks, I can't find it. Everybody thinks it's great. They all want to help. Many have excellent suggestions for making it even more effective than we had thought possible."

Then Mac and a working committee from P.F.A. and the agencies and organizations most eager to help

BETTER SURVIVAL, BETTER GROWTH
WITH
ROOTSPRED TREE PLANTERS



ROOTSPRED "Lake States" Scalper reduces competition 15" each side of planted tree.

- For effective scalping — north or south, heavy soils or light
- A deeper trench with soil loosened below root level
- A dependable satisfaction guarantee
- An economical model for Christmas Tree Growers
- Also a production plantation mower—double rotary

For specifications, prices, photos, write:

ROOTSPRED
St. Petersburg, Pennsylvania

A CAREER REPRINT FOR PROSPECTIVE FORESTERS

Second Edition, Enlarged to Include Forestry Scholarships Available in Forestry Schools

The Campaign of The American Forestry Association to encourage outstanding young men to adopt forestry as a career has resulted in the publishing of a 46-page Career reprint.

Copies of this Reprint are now available at the following prices:

1- 24 copies—50¢
25- 49 copies—45¢
50- 99 copies—40¢
100-499 copies—35¢

We will provide special quotations, on 500 or more copies.

THE AMERICAN FORESTRY ASSOCIATION
919 17TH STREET, N.W.,
WASHINGTON 6, D. C.

PLANTING TREES ?

Use a "FORESTER" or "CONSERVATOR" Planter

UT&BCo. BUILDERS OF DEPENDABLE EQUIPMENT SINCE 1933

Complete information on request

UTILITY TOOL & BODY CO.

Clintonville, Wis.

COLORADO BLUE SPRUCE

Select 3 yr., 6-10" plants. Grow into outstanding trees as boundary markers, windbreakers, etc. Densely pyramidal—from bluish-green to shining blue. Prefers sun.

Postpaid planting time

25 for $3.75

MUSSER FORESTS Box 27-E Indiana, Pa.

EVERGREEN LINING-OUT STOCK

Growers of Pine, Spruce, Fir, Hemlock, etc. Seedlings and Transplants.

FREE WHOLESALE PRICE LIST

SUNCREST NURSERIES

Box 305-E Homer City, Penna.

TREES FOR FOREST PLANTING

PINE • SPRUCE

Firs, Arborvitaes and Other Conifers. We raise all our trees in our own nurseries.

KEENE FORESTRY ASSOCIATION

KEENE, NEW HAMPSHIRE

SEEDS TREE.. SHRUB

E. C. MORAN

Stanford, Montana

TREES FOR SALE

American Arborvitae, Balsam Fir, Engelmann Blue Spruce, White Pine, Scotch Pine, Norway Spruce, White Spruce, etc. Prices reasonable and trees are GUARANTEED TO LIVE. Write for FREE Illustrated Folder.

WESTERN MAINE FOREST NURSERY COMPANY

Dept. F Fryeburg, Maine

When Writing Advertisers— Please Mention

AMERICAN FORESTS Magazine

TREE FARM MANAGEMENT SERVICE, INC.

Consulting Foresters

Forest Inventories, Appraisals, Reforestation, Management Plans and Services

1166 7th Avenue West Eugene, Oregon

put their minds to "how to introduce the project with great impact." We had thought a great deal about a poster contest featuring the "monitoring raccoon," as Mac called it, the winner of which would be used on bookcovers for school children. The thought was that costs could be defrayed by wood-using industries, banks and businesses, and organizations, who would be given the privilege of having their imprints on the covers similar to the procedure followed in the Virginia "Plant More Trees" campaign.

Mac and all concerned felt that the time required for this procedure was a full year, and that we should "get going" with something else the first year, reserving the bookcover phase for the second year. Then the idea of "Name the Good Outdoor Manners Raccoon Contest" struck like a "bolt out of the blue."

The working committee was called together again. The matter was presented to the P.F.A. board and approved. A nominal budget for the first year's operation was set up. The nine following groups became formal sponsors: Garden Club Federation of Pennsylvania; The Izaak Walton League of America, Inc.—Pennsylvania Division; Pennsylvania State University Agriculture Extension Service; Pennsylvania Department of Forests and Waters; Pennsylvania Federation of Sportsmen's Clubs; Pennsylvania Game Commission; The Pennsylvania State Grange; Soil Conservation Service, U. S. Department of Agriculture; Pennsylvania Fish Commission. Others volunteered cooperation.

A kit of materials was prepared by P.F.A.'s Publication Committee. This included a poster showing the raccoon and his "Have Good Outdoor Manners" slogan with the heading, "Hello—I NEED A NAME," followed by the rules of the contest, a list of sponsoring groups, eligibility, list of awards, the "why" story behind the project, and a bookmarker-entry blank designed for individual student use.

A sample kit was sent to all school superintendents and principals throughout Pennsylvania — some 3,500 in number—and to more than 3,000 local representatives of sponsors. In each kit was a return order card to request bookmarker-entry blanks for use in schools. The Agricultural Extension Service volunteered to have the County Extension Agent's office in each county serve as county headquarters for the contest. Suggestions for setting up county committees and for individual county contests where desired were distributed to local representatives. A letter from the president to each member of the Pennsylvania Forestry Association asked the member's assistance locally.

The contest was announced by the Governor on January 12th. The closing date was set for March 15. Newspapers, radio and television stations immediately began supporting it. Outdoor writers wrote feature stories for both daily and Sunday papers on the contest. Many included not only the rules of the contest but a reprinting of the entry blank.

Within ten days a new worry hit the officers of P.F.A., especially the Finance Committee. The best estimate available prior to the contest opening was a possible request for some 150,000 copies of the bookmarker-entry blank. This number were printed. Before ten days had passed we faced a shortage. A joint meeting of the project work committee and the Finance Committee was hastily called. I had to say essentially, "Gentlemen, the 'Name the Good Outdoor Manners Raccoon Contest' has met with such unpredictable success that we must make a decision. Do we respond to all additional requests with, "Sorry, our supply is exhausted,' or do we go back to press for more copies? In case of the latter as the choice, I must warn you that not only will the project fund be in the red, it could break the treasury of the association."

McIntyre and his committee members were asked for their most conservative estimates as to what the total number would be in view of the tremendous interest over the state. The immediate answer was an additional 320,000 to 330,000 copies.

A moment of silence pervaded the meeting. Then someone said, "Amazing! How do you arrive at this figure?" The working committee had its answers: A telephone spot check with county leaders indicated that many county activities were just getting organized and that bulk orders for schools were yet to come. The *Garden Club Federation News, The Grange News, Pennsylvania Game News* (with two articles), *Pennsylvania Angler, Pennsylvania Forests,* and large metropolitan papers—all with current stories featuring the contest—were just beginning to have their impact on

readers; certain television programs sponsored by wood-using companies had scheduled for a two-week period a promotion on the "Name the Raccoon Contest"; and many club and school groups were still engaged in planning prior to ordering bookmarker-entry blanks.

A member of the Finance Committee said, "How can we stop now? Let's keep in mind Rule Number One of the contest which reads, 'Contest is open to all students enrolled in grades 1 through 12 in any school within the state of Pennsylvania. A youth group—school, class, club—is eligible to participate as a unit, and the entry it submits will be judged with the names entered by individual students. A name identical to that entered by a group shall not be submitted by an individual of that group.' "

Unanswered questions remaining were: "Where is the money to come from? How will we ever handle the large number of entries that we may expect to receive? How can a voluntary association such as P.F.A. and the sponsoring groups with limited personnel and funds ever give adequate consideration to each and every entry to determine final winners? How many of the more than 450,000 entry blanks do you expect to have returned before the contest closes?"

Again, Mac and his committee had the answers to all these questions except one—the money. A suburban Philadelphia garden club had volunteered to classify all entries and furnish a committee to pre-judge them under the adopted rules of the contest. A system had been set up to handle returns on a daily basis. A local inn agreed to the use of its large basement meeting room for this work. We could expect between 45,000 and 50,000 *bona fide* entries to be judged.

It was unanimously decided that the project should be encouraged with full steam ahead. The Finance Committee reckoned that since one small foundation had already contributed $1,000 to the project, others should be eager and willing to contribute to such a seemingly successful and worthwhile educational endeavor. In short, the members as individuals decided to underwrite necessary immediate costs for printing and other expenses pending the raising of funds for the revised budget, which now totals more than $40,000 for the first and second phases of the project, running through the school year 1959-60.

By closing date of the contest the additional print order of 330,000 bookmarker-entry blanks (making a total of 470,000) had dwindled to a handful. The estimated 50,000 returns became a reality. Schools, clubs, conservation organizations, technical societies, and business firms began to ask for exhibits and lectures on the Good Outdoor Manners project. There is a great demand for posters and roadside, campsite, and park markers depicting the raccoon and his slogan. All these services will cost money, too. More headaches, but a good feeling of accomplishment also! As this is being written, we learn that the State Highway Department is preparing a new official state map and desires to have our forceful raccoon symbol and slogan reproduced in full color on it.

As is usual in an effort of this kind the adult population, through the interest and efforts of our children, are becoming "educated."

It all seems paradoxical—"so much success with so little to do with." The results would have been impossible without voluntary leadership, time, patience, some risk, and above all a top-notch idea to help solve a real problem, the direction of which fell to an outstanding, public-spirited and practical conservationist, A. C. McIntyre.

No doubt the educational value among school boys and girls throughout Pennsylvania is of paramount importance. But there are other values too. Comments of the Drexelbrook Garden Club which did such an excellent job in pre-judging the entries serve as an example:

"The Drexelbrook Garden Club accepted from Mrs. William Lappin, State Junior Activities Chairman, the tremendous chore of pre-judging all entries for naming the Good Outdoor Manners Raccoon. Mrs. John Lee, president of the Drexelbrook Garden Club, appointed a Junior



The Smallest Effective Kit on the Market!

Weighs only 1¼ oz. Contains 3 suction cups, knife-blade, antiseptic, lymph constrictor & easy instructions. Everything needed for suction treatment — the only first aid method approved by medical authorities. Works on insect bites, too!

If not available at your drug or sporting goods store, send $2.50 cash, check, M. O. (no C.O.D.'s) to: Cutter Laboratories, Berkeley, Calif., Dept. 9-67E



Repels, kills Chiggers, Ticks, Mosquitos, Black Flies. Contains 5 basic repellents proved best by U.S. Army. Used by national and state Wildlife Services, loggers, etc. Harmless to humans and animals. One spraying protects all day. America's No.1 spray-on repellent.

COMMENDED PARENTS

MINE SAFETY APPLIANCES CO.
54 Branches Everywhere
Home Office: Pittsburgh, Pa.

SILVA COMPASS
Simpler — More Accurate

Recommended by foresters for cruising. Easier to use, faster, positive. Direct course readings. *Write for free literature and instructions.*

SILVA, INC., Dept.A, LaPorte, Ind.





Sandvik No. 1 Bush-Axe

FASTER — SAFER — EASIER THAN THE COMMON AXE FOR BRUSH AND SAPLINGS

Light in weight, balanced for use with one hand. Thin, flat, extra-sharp. Swedish Steel Blade is replaceable. Write Department F for circular and Foresters' Tool Catalog.

Sandvik STEEL, INC.
SAW & TOOL DIVISION 1702 Nevins Rd., Fair Lawn, N. J.

TRAIL RIDERS OF THE WILDERNESS



John B. Schutte

1959 Expedition Schedule

HIGH UINTAS WILDERNESS, UTAH
JULY 7 TO JULY 17
$230 from Vernal, Utah
Party limited to 20

QUETICO-SUPERIOR WILDERNESS, MINNESOTA—(Canoe Trip)
JULY 14 TO JULY 23
$210 from Ely, Minnesota
Party limited to 17

WIND RIVER MOUNTAINS, BRIDGER WILDERNESS, WYOMING
JULY 14 TO JULY 25; AUGUST 4 TO AUGUST 15
$250 from Pinedale, Wyoming
Parties limited to 25

MAROON BELLS-SNOWMASS WILDERNESS, COLORADO
JULY 24 TO AUGUST 3; AUGUST 4 TO AUGUST 14
$230 from Glenwood Springs, Colorado
Parties limited to 20

SAWTOOTH WILDERNESS, IDAHO
JULY 28 TO AUGUST 7; AUGUST 11 TO AUGUST 21
$230 from Ketchum, Idaho
Parties limited to 25

ANACONDA-PINTLAR WILDERNESS, MONTANA
AUGUST 3 TO AUGUST 12
$230 from Butte, Montana
Party limited to 20

TETON WILDERNESS, WYOMING
AUGUST 10 TO AUGUST 21
$250 from Moran, Wyoming
Party limited to 25

SAN JUAN WILDERNESS, COLORADO
AUGUST 11 TO AUGUST 21; AUGUST 24 TO SEPTEMBER 3
$230 from Durango, Colorado
Parties limited to 25

GILA WILDERNESS, NEW MEXICO
AUGUST 25 TO SEPTEMBER 4
$250 from Socorro, New Mexico
Party limited to 20 (Filled)

MT. WHITNEY-HIGH SIERRA, CALIFORNIA
AUGUST 26 TO SEPTEMBER 4
$250 from Lone Pine, California
Party limited to 20

PECOS WILDERNESS, NEW MEXICO
SEPTEMBER 7 TO SEPTEMBER 17
$230 from Santa Fe, New Mexico
Party limited to 25

Write or wire for detailed information, itineraries and reservations

919 Seventeenth Street, N.W. **Washington 6, D. C.**

THE AMERICAN FORESTRY ASSOCIATION

Activities Chairman, Miss Margaret Ingram.

"The management of Drexelbrook Inn was kind enough to allow us the use of a basement room as the 'Raccoon Den.' With trash cans and plywood for tables, two old bedspreads for tablecloths, an electric heater, a hot plate, and refreshments for our personal comfort, cartons, labels, pencils, bags, paper, and rubber bands for the work on the entries, this group of inexperienced women embarked on an uncharted course.

"We established a routine, meeting three times a week, the Saturday group being composed mainly of teenage girls. In the last two weeks the tri-weekly meetings became daily meetings, with the workers taking hundreds of cards home at night for processing.

"Each card was processed and counted for grade, sex, county, and name. In reviewing this handling, it may seem to the casual observer that there was a great deal of lost motion involved, but we feel each card was carefully scrutinized for all possibilities by many pre-judges, as the various steps in the processing were handled by different women. Each day's entries were judged and all of the best cards were put aside for final pre-judging. This daily judging gave us a manageable group of cards for electing ten to fifteen possible winners for each grade which will be finally judged by the committee set up by the Forestry Association.

"We eliminated names denoting comic-book characters and television personalities, known copyrighted names, such as 'Manners' and 'Ringtail,' and all objectionable names. Since we understood the raccoon may become a national symbol, we avoided names connoting the state of Pennsylvania. We selected the best reasons given for the name from the most popular name groups. We felt it fair to judge each grade independently so that each card was judged with its peers. Insofar as possible, considering the tremendous number of entries, we tried to follow the initial rules of pre-judging set up by the Forestry Association. In compliance with them, we selected the names most frequently submitted to tally on our name sheets. There were too many miscellaneous names to classify all of them.

"The idea of the 'good manners raccoon' was wholeheartedly accepted by many teachers as a classroom project in many courses, such

SHARP TOOLS Work Fast, Easy
Keep 'em Sharp Easily with a
CROSS GRIND-STONE Electric Powered



Quick, convenient electric powered grind-stone has uniform speed—won't slow down or stall under heaviest work. Safe—will not draw temper. Hundreds in use. Satisfaction Guaranteed.

Portable
Fast-Cutting

Write today for full information.
S. RALPH CROSS & SONS, Inc.
132 MAYFIELD ST., WORCESTER, MASS.

8 Patents. Best material. Sold by the thousands.



Infringers and imitators warned
Best Chrome Steel—Strong, Durable

THE RENOWNED
CHARLES H. RICH
"Forest Fire Fighting Tool"
Write for Prices and Descriptions
THE C. H. RICH FOREST FIRE TOOL CO.
218 West Bald Eagle Street, Lock Haven, Pa.

When Writing Advertisers—
Please Mention
AMERICAN FORESTS Magazine

WANTED
ADVERTISING
and
SALES PROMOTION MANAGER

Monthly magazine in the natural resource field is seeking an advertising and sales promotion manager.

Position calls for aggressive, ambitious man interested in the Conservation field and one who desires to build for the future. Knowledge of the natural resource field essential, and some advertising experience desirable.

Location—Washington, D. C. Position calls for space selling in the field and by mail, and requires ability to prepare sales letters and promotion material. No age restrictions. Salary open. Write promptly and fully to:

Box N.R.
% The American Forestry Association
919 17th Street, N.W.
Washington 6, D. C.

as English and science, because entire classes entered the contest. Many cards were eliminated with a feeling of regret because of the sincere thought and efforts of the children, each reflecting a different personality.

"Though this project involved hundreds of hours of work, it was an enriching experience for us. We are now more fully acquainted with Pennsylvania's geography and history and with all the habits and appearance of the raccoon. Along with the work, we had many rewarding moments for our energy expended. The laughs from the humorous cards, such as 'Pantless Pete—he forgot to put on his pants,' echoed through the 'Raccoon Den.' A feeling of warm fellowship and cooperation developed through close work with each other, one of our most important aims in accepting and completing this project."

We are confident that we will see better outdoor manners practiced in Pennsylvania, and we hope elsewhere, as a result of the hard work of volunteers in introducing such a forceful character, Howdy, and his "Have Good Outdoor Manners" slogan.

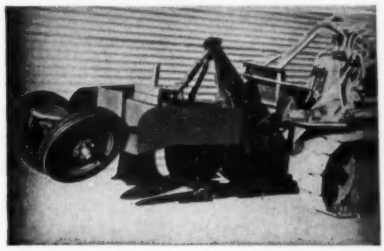
Next year will see him on posters, bookcovers and elsewhere, reminding us all as individuals to regard and respect our forests, fields, streams, wildlife, parks, picnic areas, highways, and by-ways with Good Outdoor Manners.

Lasting success will have to come from more than voluntary service. Educational materials, displays, constant press, radio and TV coverage, travel expenses, office help, and other costly items will be needed. We can only hope that foundations and organizations will help give the project the continuing support it deserves.

The project is in keeping with The American Forestry Association's annual meeting theme for 1959, "Resources and People—A Problem of Co-Existence," suggested by Dr. Ralph Marquis, director, Northeast Forest Research Station, and Program Committee Chairman.

On the Research Front

Dutch elm disease control in the future may rely on tree trunk insecticide injections rather than sprays, according to University of Wisconsin research. Control by injections of systematic insecticides would be more convenient, less messy and probably less costly, and safer for birds and wildlife, say entomologists A. F. Al-Azawi and Dale M. Norris, Jr. Such treatment might be effective longer than sprays.



SCM MODEL TREE PLANTER

Available for D2, T6, TD6, 40C 420C.

Our five distinctly different models are designed for deep penetration and high survival in all soil conditions and terrain.

No distorted roots when Lowther machines are used.

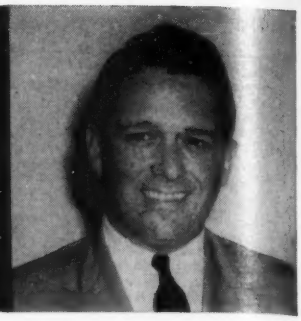
For Details write:
HARRY A. LOWTHER COMPANY
1671 Dearborn Street
AURORA, ILLINOIS

PANAMA

- **B.B. Fan Drive Pumps**
- **B.B. Slip-on Units**
  Pump and Engine
- **Slip-on Units Complete**
  Pump, Engine, Tank, Completing Materials, All on steel skids
- **Compensating By-passes**
- **High Pressure Hose**
- **Pistol Grip Cut-offs**
- **Combination nozzles**
- **Vacuum Lift Systems**
- **Automatic Float Valves**
- **Tree Injectors**
  Pressure Type
- **Tree Marking Guns**
  Pressure Type
- **Stainless Steel Drip Torches**
- **Flame Guns**
- **Angle Gauges**
  For Estimating Basal Area

Write For Free Catalog
PANAMA PUMP CO.
410 So. 37th Ave.
Hattiesburg, Mississippi

Reading about RESOURCES



By MONROE BUSH

THE UNFRIENDLY FORESTS

THE tropics of the world are unhappily distinguished by three conditions: human poverty, and land that runs to both spartan desert and rampant forest. These deserts and forests are, of course, the chief explanation of the poverty.

In the temperate zones the land is a people's first asset. In the tropics land is, if not an avowed enemy, at least a problem. How to live upon and wring a livelihood from the desert? How to live within and feed and clothe one's family from the forest? These are the two harassing questions that have plagued most of tropic mankind from the earliest days.

Even now, with DDT and mechanical irrigation, with bulldozers and power saws, the questions still do not yield to an easy answer.

In recent years the studies of the Sahara by Richard St. Barbe Baker have pointed up anew the desert problems, and challenged the economy and science of our time to a full-scale assault upon this brown, crawling desolation which each year eats farther into the green lands that remain.

But these green lands, being largely tropical forest, offer some challenges of their own. To understand this, to appreciate exactly what a tropical forest is, is obviously the first order of business, before these forests can be tamed and fully utilized for the growing populations of the tropics. I know of no better introduction to the subject than a remarkable book just published by J. B. Lippincott Co. (1959, N. Y.) and written by W. B. Collins, Deputy Chief Conservator of Forests, Ghana: **The Perpetual Forest.**

This book is perpetually interesting, from first page to last. It is the only readable, "popular" discussion of tropical forests that is available —yet it is accurate and thoroughly scientific in approach. It should be read by every American forester who has not made a separate study of tropical forest and who has not the time to do so. Within these 250 pages there is all any educated man need know of tropical forests—unless and until he becomes directly engaged with their problems.

Dr. Collins has lived for 20 years in Ghana, and he is writing about the tropical forest of the African equator that he not only knows best, but knows as well as any man on earth. There are many specifics in these pages that would not apply to other tropic regions—and about other regions there are many particular things that could be reported that differ from Dr. Collins' forest. However, the simple fact is that very few men are going to read more than one book on the subject. That being the case, this is the book. The growing body of research regarding the various tropical forests of the world is not reported upon in **The Perpetual Forest.** The hundred economic problems in tropical forest utilization are scarcely suggested.

This is not, let us emphasize, a complete book on the subject. In fact, it would be of practically no use at all to anyone called to the actual processes of tropical forest management. But it is the one book on the subject that has a reasonable chance of being bought in some quantity, and begun and actually finished by more than a few hundred people.

Dr. Collins begins with the movingly haunting account of the felling of the Odum tree—as powerful an account of the felling of a tree as I suspect has ever been written. It is a passage that would have done credit to the incomparable Aldo Leopold—and it sets the almost mysterious, other-worldly tone of the entire volume.

The chapter dealing with termites, the scavengers of the tropical forest the world over, is as exciting as anything that has ever been written on bees—which are not one whit more remarkable than termites. It is a natural history adventure story of the first water, and of prime importance in a book such as this, considering that there are several million termites to the acre of tropical forest.

Perhaps the two key chapters, however, are "The Closed Forest" and "The Wood from the Trees." The first describes the actual appearance and character of an equatorial forest in darkest Africa, and the second is concerned with the uses to which such a forest can be put.

We learn, for instance, that such a forest is by no means as romantic as we had supposed, but a dark, unfriendly, tomb-like place. We learn, too, that the produce from the tropical forest is by no means properly utilized today, certainly not in terms of the forest's astounding potential.

And the facts and secrets continue to unfold. They are on every page, and they are expressed with great skill. It is helpful and informative to read this book; but more than that, it is a pleasure to do so—and that's something that can be said of a mere handful from the publishers' torrent.

NEW AND TO NOTE

One difficult problem in tropical forest management is proper tree identification. And while the professionals have that licked in the U.S., amateur outdoorsmen are still embarrassed by problems of tree identification – especially when accompanied by some urban friend who expects the woodsman to spout names for the flora as easily as he

(*Turn to page* 45)

TRY
THE SAW
WITH
POWER
PLUS

NEW
HOMELITE
7 21 C

Try the new Homelite 7-21C in a free demonstration and you'll know that *this* chain saw has all of the extra lugging power you need for felling the big trees. With a new gear ratio of 2.84 to 1, it cuts through 20″ trees in 18 seconds, fells trees up to 7 feet in diameter.

The Homelite 7-21C can be your partner for profit in other ways, too. Its balanced 21 pounds* mean easier, safer handling in any cutting location, and cutting position. The big fuel tank lets you cut longer between refuelings . . . more cutting time means more profit for you.

The 7-21C also has all of the famous Homelite Magic 7 features: tough, drop forged, counterbalanced crankshaft — famous Homelite high compression, short stroke engine design — large air filter — automatic clutch — revolutionary intake valve — simple piston pump oiling with finger-tip controls — automatic governor — plus full 7 months' guarantee.

Available with a full line of attachments including plunge-cut bow, brush cutter and clearing bar.

Team up for profit with a new Homelite 7-21C. See and try it in a free demonstration at your nearby Homelite dealer's.

*less bar and chain



- gear drive
- 21 pounds
- guaranteed for 7 months
- straight blades from 14″ to 60″
- plunge-cut bow 16″

HOMELITE
A DIVISION OF TEXTRON INC.

4205 RIVERDALE AVE., PORT CHESTER, N.Y.

In Canada: Terry Machinery Co., Ltd. - Toronto, Montreal, Vancouver, Ottawa, Edmonton, Moncton

Find Your Homelite Dealer in The 'Yellow Pages'

ANOTHER FIRST! All new Homelite bar and bow guides guaranteed for a full 60 days! Straight blades: Hard Track plus Extra Hard Tip. Bow guides: Extra Hard Surface *all the way around.*

HOW RIEGEL USES CAT DIESEL TRACTORS FOR PROFITABLE SITE PREPARATION



One of two D7s: Pulling a rolling chopper, this D7 equipped with No. 7A Bulldozer covers 17 to 20 acres a day. Riegel gets the same production from its other D7. Riegel also uses its D7s, rated at 128 flywheel horsepower, for road construction.



One of six D6s: Preparing site with a disc harrow, this D6 averages 6 to 8 acres a day. Riegel counts on similar production from its other D6s. Rated at 93 flywheel HP and equipped with No. 6A Bulldozers and winches, these machines also build roads and fire lines.



One of three D4s: Equipped with No. 4A Bulldozers, Riegel's D4s are often employed for light site preparation. Their main duty: fire line work. Rated at 63 flywheel horsepower, they're also used for clearing right of way, like the D4 shown here.

Of the 235,000 acres in its Woodlands Division, Bolton, N. C., the Riegel Paper Company clears and plants 10,000 acres a year with about 9,000,000 pines. The Division, standardizing 100% on Cat-built machines, has 12 in its line-up—two D7s, six D6s, three D4s and a No. 12 Motor Grader. Chief Forester E. S. Thornton says: "We are well satisfied with the tractors and the service we get from our Caterpillar Dealer."

Standardizing on rugged yellow machines has many advantages. Their availability is exceptionally high. They work day after day with a minimum of down time and maintenance. For example, the exclusive Caterpillar oil clutch delivers 2,000 hours without adjustment. Other advantages: operator familiarity with one make of machine means greater production. And there's a big plus in one-stop service, wherever and whenever you need it, from your Caterpillar Dealer. From the D4 (63 flywheel HP) to the take-charge D9 (320 flywheel HP), there's a Cat Diesel Tractor suited for every phase of site preparation.

To help you in your selection, Caterpillar has compiled cost analyses of its tractors in a wide range of jobs—Stump Treatment; Stump Clearing and Tree Cutting; Chaining; Raking and Windrowing; Harrowing; Planting. For further information, write Logging Section, Caterpillar Tractor Co., or call your nearby Caterpillar Dealer.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

CATERPILLAR

Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

FIND YOUR CATERPILLAR DEALER IN THE YELLOW PAGES

MODERN HEAVY-DUTY MACHINES FOR PROFITABLE SITE PREPARATION